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ABSTRACT

More than 200 projects and programs, representative of current environmental education projects and programs in the United States, are described in this directory. They cover the gamut of operation and orientation from financially well supported projects to "shoestring" operations conducted by one person in his spare time; from classical nature study to modern urban studies. Information accompanying each entry outlines the following: project title, director's name and address, headquarters location and facilities available, principal staff, project history, present commercial affiliations, project objectives, materials produced, materials available free of charge, materials for purchase, additional materials being developed, project implementation, teacher preparation, project evaluation, summary of activities since 1969, and plans for the future. Entries are arranged alphabetically by state. Appended material includes: (1) a list of the names and addresses for those persons functioning as members of the Science, Mathematics, and Environmental Education Information Analysis Center's network of state education department coordinators for environmental education; and (2) a list of projects, recommended by the above coordinators, which did not respond to the survey questionnaire as of October 7, 1972. (BL)

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ENVIRONMENTAL EDUCATION INFORMATION REPORTS

A DIRECTORY OF PROJECTS AND PROGRAMS IN ENVIRONMENTAL EDUCATION FOR ELEMENTARY AND SECONDARY SCHOOLS

compiled by John F. Disinger

ERIC Information Analysis Center for
Science, Mathematics, and Environmental Education
1460 West Lane Avenue
Columbus, Ohio 43210

December, 1972

ERIC/SMEAC

ERIC is a national information system designed and supported by the U.S. Office of Education for providing ready access to results of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs. Through a network of specialized centers or clearinghouses, each of which is responsible for a particular educational area, current significant information relevant to education is monitored, acquired, evaluated, abstracted, indexed, and listed in ERIC reference publications. Through these reference publications any educator, anywhere in the country, has easy access to reports of innovative programs, conference proceedings, bibliographies, outstanding professional papers, curriculum-related materials, and reports of the most significant efforts in educational research and development, regardless of where they were first reported.

In addition, each clearinghouse produces newsletters, bulletins, interpretive summaries, research reviews, and bibliographies. These products are made available by the ERIC system and are also announced in a separate yearly compilation.

The ERIC Clearinghouse for Science, Mathematics, and Environmental Education is located at The Ohio State University, Columbus. Originally the center had responsibility only in the area of science education, and was named the Science Education Information Analysis Center (SEIAC). When responsibility for mathematics education was added, it became the Science and Mathematics Information Analysis Center (SMAC). In 1971 it was designated as the center for environmental education, and is now known as the Science, Mathematics, and Environmental Education Information Analysis Center (SMEAC).

This publication was prepared pursuant to a contract with the Office of Education, United States Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

PREFACE

This publication represents the first attempt on the part of ERIC/SMEAC to develop a directory of representative current environmental education projects and programs in the United States. As such, it must be seen as an exploratory effort, incomplete and uneven, but representative of a rather extensive listing of school-related efforts in environmental education.

Several sources have been utilized in gathering information and materials for the directory. A generalized questionnaire was mailed to each environmental education project and program known to ERIC/SMEAC, with request for completion and return. Environmental education coordinators and supervisors operating at the state education department level were requested to identify outstanding projects and programs in their own and neighboring states; each program so identified was contacted.

The survey questionnaire made reference to "projects", more than one respondent pointed out that his group's effort should more properly be designated "program." However, no attempt was made in the directory to differentiate, and the term "project" has been commonly used.

In addition to summaries of completed and returned questionnaires, the directory lists in Appendix A those projects recommended by state coordinators which did not respond to queries as of October 7, 1972. Reports received after October 7 appear at the end of the main sections, Page 471 forward. Also given, in Appendix B, are the names and addresses of those persons functioning as members of SMEAC's network of state education department coordinators for environmental education. Some changes have taken place in the membership of the state coordinator network since recommendations were received.

The projects and programs described in the body of the directory and listed in Appendix A cover the gamut in all respects, from financially-well supported projects to what might be termed "shoestring" operations literally conducted by one person in his spare time, and from "classical" nature study to "modern" urban studies. Thus are reflected the fluidity of definition currently characterizing environmental education, as well as differences in levels of support accorded by various agencies, in various places.

There is little doubt that much of the information contained in the directory is already outdated, and more will be in a short time. An updated version is planned for Autumn 1973.

Production of a directory such as this involves the efforts of a number of persons, both at ERIC/SMEAC and elsewhere. Those project and program directors who completed and returned questionnaires deserve special thanks, as do members of the state coordinator network. Among SMEAC staff members heavily involved were Patricia E. Blosser, Judith K. Dunson, Cheryl L. Fuller, Stanley L. Helgeson, Linda S. Hemmler, Robert W. Howe, Beverly M. Lee, Debra S. Rickner, Robert E. Roth, Edith P. Santana, Maxine R. Weingarth, and John H. Wheatley. Typing of the manuscript was completed by Norma V. Disinger. Major contributor to the progress of the survey was James H. Baker, who made telephone contact with many state coordinators and individual project and program directors in an effort to insure relative completeness.

October, 1972

John F. Disinger
Compiler

TABLE OF CONTENTS

Annotated Directory of Environmental Education Programs, Arranged Alphabetically by State

Page

ALABAMA

Mountain Brook — Nature Trail - Environmental Education Courses 3
Tuscaloosa — University of Alabama Arboretum 5

ALASKA

Anchorage — Environmental Interpretation and Education-National Park Service 6
Juneau — Environmental Education 8
Soldotna — Environmental Education Program 10

ARIZONA

Phoenix — Project Outreach 13

ARKANSAS

Forrest City — Emergency School Assistance Program, Community Corps 15

CALIFORNIA

Auburn — Area III Science Project: Educational Priorities for the Seventies 17
Hanford — (Environmental Awareness) 19
Novato — Multi-Graded Summer School Conservation Project: 4-11th Grades 21
Sacramento — Conservation Education Service, California Department of Education 23
Santee — Environmental Education: A Teacher's Guide with Inquiry and Value Seeking Strategies 26
Springville — Scicon - Clemmie Gill School of Science and Conservation 28

COLORADO

Aurora — Plains Conservation Center: Environmental and Historical Outdoor Education Program 31
Boulder — Environmental Studies Project 33
Boulder — The Mountain View Center for Environmental Education 36
Colorado Springs — High Trails Outdoor Education Program 39
Denver — Balarat Center for Environmental Studies 42
Denver — Human and Nonhuman Ecology Seminar 45
Denver — Human Ecology 47
Denver — East High Senior Seminar 49
Evergreen — Outdoor Laboratory School 51
Fort Collins — Northern Colorado Outdoor Nature Center Project 53

		Page
CONNECTICUT		
Avon	Talcott Mountain Science Center for Student Involvement, Inc.	56
Fairfield	"LIFE" - Living in Fairfield's Environment	58
New Milford	Eliot Pratt Education Center	61
Stamford	A. Elementary Ecology B. Oceanography - High School	63
Wilton	Total Education in the Total Environment (T E.T.E)	65
DELAWARE		
Newark	Outdoor Laboratory	68
Newark	Population - Environment Curriculum Study	71
Seaford	Population - Environmental Center	73
Wilmington	Population Environment Project	75
DISTRICT OF COLUMBIA		
Washington	Environmental Outdoor Laboratory School	78
Washington	Critical Seeding and Stabilization	80
FLORIDA		
Cocoa	Broad Spectrum Environmental Education Program	82
Crystal River	Marine Science Station	85
Ft. Lauderdale	Interdisciplinary Environmental Education	87
Ft. Myers	Model Strategy for an Effective Environmental Education Program	89
Mayport	Marine Science Education Center	92
Miami	Environmental Education in the Dade County Public Schools	95
Pensacola	Environmental Sensitivity Project	98
Perry	Taylor County Resource-Use Outdoor Education Center	101
Thonotosassa	Nature's Classroom - Outdoor Education	104
West Palm Beach	Pine Jog Environmental Sciences Center	106
GEORGIA		
Atlanta	Fernbank Science Center	109
Atlanta	Georgia Department of Natural Resources, Division of Parks and Recreation	111
Marietta	Kennesaw Mountain Environmental Study Areas	113
Rome	Natural Resource Use Institute	116
HAWAII		
Honolulu	Foundational Approaches in Science Teaching - FAST	117
IDAHO		
Burley	Howell Canyon Conservation Tour	120
Caldwell	Wilson School Desert Environmental Studies	122
Donnelly	Summer Workshop in Conservation and Environmental Education	125
Idaho Falls	Bonneville Environmental Education Program	127

		Page
New Meadows	Long Pin Conservation Tour	129
Shoshone	Outdoor Education	131
ILLINOIS		
Carthage	Applied Biological Science	133
Crystal Lake	Crystal Lake Outdoor Education Program	135
Elmhurst	Environmental Issues	137
Genoa	DeKalb County Natural Resource Center	139
Grafton	Operation Survival Through Environmental Education	142
Rochester	Environmental Conservation	144
Sycamore	Sycamore FFA Cooperative	146
INDIANA		
Evansville	Operation Awareness	148
Martinsville	Inner-City Resident Outdoor School	150
Richmond	SEE SELF-Earth Ethic	152
IOWA		
Ames	Project ECO - An Environmental Curriculum Opportunity	155
Davenport	Handicapped Children's Nature Study Center	158
Delhi	Conservation Ecology and Environmental Problems - Conservation I Advanced Conservation Seminar and Projects - Conservation II	161
Ft. Dodge	Dolliver Park Outdoor Classroom	164
KANSAS		
Kansas City	Nature Trail and Outdoor Laboratory	165
Shawnee Mission	Shawnee Mission Environmental Science Laboratory	167
Shawnee Mission	Cooperative Learning through Environmental Activities in Nature	170
Topeka	Outdoor Education	171
Topeka	Environmental Education Demonstration Project, ESEA, Title III, Section 306	173
KENTUCKY		
Golden Pond	Conservation Education Center - Land Between the Lakes - TVA	176
Middlesboro	Cumberland Gap National Historical Park National Environmental Study Area	178
LOUISIANA		
Natchitoches	Workshop in Louisiana's Natural Resources and Environmental Management Education	180
MAINE		
Bangor	Bangor Environmental Education Project	182
Bryant Pond	Maine's Conservation School	184
Norway	School Site Monitoring that Can Be Used as a Basis for Developing School Site Environmental Policy	186

		Page
Yarmouth	Maine Environmental Education Project, Title III, ESEA	188
Yarmouth	Regional Environmental Education Program	192

MARYLAND

Cumberland	Outdoor School	195
Frederick	Frederick County Outdoor School for Grade 6 and Grade 8	197
Hagerstown	Washington County Outdoor School	200
Oakland	Environment - A Basic for Curriculum	203
Rockville	Environmental Education	205
Upper Marlboro	Environmental Education Program - Prince George's County Public Schools	208

MASSACHUSETTS

Auburn	SCENIC	211
Belmont	Habitat Inc. - School of Environment	213
Burlington	The Natural Science Series	215
Cambridge	Outdoor Education Program	217
Concord	Fiske Hill Environmental Study Area	219
Franklin	P.T.A.'s Parmenter Elementary School Nature Trail	222
Lincoln	Massachusetts Audubon Society Education Programs	224
Orange	Manah Fish and Game Club	226
Rockland	Fox Run - Natural Science Area	227
South Weymouth	Project PART-TIME	229
Springfield	Environmental Center for Our Schools - E.C.O.S.	231
Sudbury	Interdepartmental Department - Environmental Education	234
Waltham	Waltham Summer Environmental Science Program	236
Winchendon	A Course in Field Ecology	238

MICHIGAN

Bloomfield Hills	Outdoor and Environmental Education	240
Lansing	Education and Training Section, Information and Education Division, Michigan Department of Natural Resources	243
Pontiac	A Community Action Model to Reduce Aquatic Pollution	246

MINNESOTA

Excelsior	Department of Interpretive Services, Hennepin County Park Reserve District	249
Isabella	Northeastern Minnesota Environmental Learning Center	251
Minneapolis	Minnesota Environmental Sciences Foundation, Inc.	253
Palisade	Environmental Education and Recreation	255
Red Wing	Environmental Learning Center, Inc.	257
Richfield	Wood Lake Nature Center	259
St. Paul	Natural Resource Education	262
St. Paul	Minnesota Environmental Education Program	264

		Page
MISSOURI		
Glencoe	Rockwoods Reservation	267
Higginsville	Field Ecology (Establishment of an Ecological Museum)	269
MONTANA		
Alberton	Outdoor School in Conservation	271
Billings	Environmental Education	273
Columbia Falls	Outdoor Education	276
Deer Lodge	Powell County Environmental In-Service Curriculum Center	278
Great Falls	(Conservation and Summer Camping)	281
Missoula	Conservation and Wildlife Project	284
NEBRASKA		
Chadron	6th Grade School Camping	286
NEVADA		
Fallon	Clean Sweep - An Environmental Preservation Project	288
NEW HAMPSHIRE		
Concord	Project SEE (School Environmental Education)	289
Keene	Keene Environmental Science Project	291
NEW JERSEY		
Berkeley Heights	Union County Outdoor Education Center	293
Branchville	Stepping Stone Environmental Education Center	295
Browns Mills	Conservation and Environmental Studies Center, Inc.	297
Cranford	IDES - Interdisciplinary Development of Environmental Studies	300
	DEAP - Dynamics - Environment Project	
Cranford	Environmental Education	302
Lincroft	The Sandy Hook Environmental Education Center	304
Morristown	Education for Survival: Ecology in Science and Social Studies	307
Upper Montclair	Implementation of State of New Jersey Master Plan for Environmental Education (N. J. State Council for Environmental Education)	310
NEW MEXICO		
Roswell	Science Research and Resource Center	313
NEW YORK		
Bronx	Wave Hill Center for Environmental Studies	316
NORTH CAROLINA		
Beaufort	School/Community Environmental Studies Project	318
Salisbury	Supplementary Education Center	320
Washington	Environmental Science Study Curriculum	322

Page

OHIO

Cincinnati — Outdoor Education Center 324
Cleveland — Life Science Investigations: Man and the Environment 326
Dayton — Aullwood Audubon Center - A Facility of the National Audubon Society 328
Hebron — (Environmental Problems) 330
Mansfield — Outdoor Education 332
Perrysville — Mohican School in the Out-of-Doors 334
Willoughby — Center for the Development of Environmental Curriculum 336
Worthington — Worthington Outdoor Education Department 338

OKLAHOMA

Ada — Environmental Education 341
Bethany — Environmental Biology 343
Pawnee — Conservation Problems in Our Community 345
Sulphur — National Environmental Education Development 346

OREGON

Eugene — Curriculum Development in Outdoor Education 348
Hillsboro — Washington County Intermediate Education District Environmental Education 350
Madras — Outdoor School 352
Portland — Catch Project 354
Portland — Eco-Aesthetics Continuum 356
Portland — Multnomah County Outdoor Education 359
Portland — Learning Involvement for Existence (L.I.F.E.) 361

PENNSYLVANIA

Blue Bell — Project CARE (Cooperative Action to Restore Our Environment) 363
Connellsville — Environmental Education Curriculum Project 365
Greencastle — Center for Environmental Studies 367
Harrisburg — Outdoor and Environmental Education 369
Reading — An Interdisciplinary Problem-Solving Approach in Environmental Education 371
Sellersville — Environmental Education - A Relevant Curriculum 374

SOUTH CAROLINA

Charleston — Oceanographic Sciences Conceptual Schemes Project: Title III ESEA, PL 89-10 376
Columbia — Conservation Curriculum Improvement Project 378

SOUTH DAKOTA

Chester — Interlakes Environmental and Outdoor Education Program 380

TENNESSEE

Nashville — Outdoor Education Department 383
Norris — Use of Norris Dam Reservation in Environmental Education 386

Page

Oak Ridge — Cooperative Science Education Center, Inc. 388
Townsend — Maryville College Environmental Education Center 390

TEXAS

Austin — Environmental Education 393
Corpus Christi — Outdoor Education and Human Development 395
Plano — (Environmental Studies) 398

UTAH

American Fork — Environmental Education for All Seasons in Utah County, Utah 400
Moab — Grand County Environmental Advisory Committee 403
Monticello — Blue Mountain Environmental Science School 406
Parowan — Hidden Haven Environmental Education Center 409
Salt Lake City — Mill Hollow Center (Environmental Science) 411
Springville — Nebo School District Outdoor Education Committee 413

VERMONT

Bellows Falls — Development of Outdoor Ecological Laboratory 415
Rochester — Community Planning - Local Government - Outdoor Education Program 417
St. Johnsbury — (Conservation Education) 419
White River Junction — Environmental Education Program - Hartford School District 420
Woodstock — Vermont Environmental Center, Inc. 422

VIRGINIA

Hampton — Program for the Gifted - ESEA Title III Project 424
Naruna — Natural Resources Management 427
New Castle — "CARE" - Conservation and Recreation Exploration 428

WASHINGTON

Bellingham — The Development and Field Testing of a Pilot Program in Environmental Education in the Sedro-Woolley School District. 430
Lynnwood — Marshall Outdoor Laboratory 433
Mt. Vernon — Center for Environmental Studies 435
North Bend — Camp Waskowitz Outdoor Laboratory 437
Randle — Cispus Environmental Center 439

WEST VIRGINIA

Charleston — Outdoor Education Project, Major Environmental Exhibit, Nature Interpretation, In-Service Training for Teachers, Awards 441
Kingwood — (Outdoor and Environmental Education) 442
Kingwood — Environmental Awareness 444
Wheeling — Nature Education Department, Oglebay Institute 446

		Page
WISCONSIN		
Cameron	Environmental Education	448
Chetek	Outdoor Education	450
Franklin	K-12 Environmental Education Program	452
Green Bay	I-C-E	454
Madison	K-12 Environmental Education Program	457
Reedsburg	Environmental Science I and II	460
Sun Prairie	Ecology and Human Values	462
WYOMING		
Cheyenne	Eco-Curriculum Development and Learning Laboratory	464
Kemmerer	Kemmerer Outdoor Laboratory	466
Lander	Conservation Center for Creative Learning	468
Lander	National Outdoor Leadership School	470

RESPONSES RECEIVED AFTER OCTOBER 16, 1972

Woodstock, ILL.	Woodstock Environmental Education Project	471
Kirksville, MO.	Missouri Environmental Studies Approach (MESA)	474
Columbus, O.	International Field Studies	476
Mansfield, O.	Outdoor Education	478
Rapid City, S. D.	K-12 Environmental Education Project	480
Everett, WASH.	Silverton-Waldheim Outdoor Education Project	482
Wausau, WIS.	Wausau Outdoor Education Center	484
APPENDIX A	Recommended Projects and Programs Which Did Not Return Completed Questionnaires	485
APPENDIX B	State Coordinators for Environmental Education	511

ANNOTATED DIRECTORY OF ENVIRONMENTAL EDUCATION PROJECTS AND PROGRAMS, ARRANGED ALPHABETICALLY BY STATE

A. PROJECT TITLE: NATURE TRAIL - ENVIRONMENTAL EDUCATION COURSES

B. PROJECT DIRECTOR: Mrs. Maxene Wright, Brookwood Forest Elementary School, Mountain Brook, Alabama 35223. (205)967-0730

C. PROJECT HEADQUARTERS:
1. Mountain Brook Board of Education, 3 Church Street, Mountain Brook, Alabama 35213. Mr. Zollie C. Reed, Assistant Superintendent.
2. Special facilities or activities available for visitor viewing: Nature Trail.

D. PRINCIPAL STAFF: All are regular faculty members.

E. PROJECT HISTORY:
1. Principal originator: Mrs. Wright.
2. Date and place of Initiation: Nature Trail, Spring - 1965; ISCS-Environmental Unit, 1971-72; Unit on Earth Science, 1970-71; EIS-Ecology Unit, 1970-71.
3. Overall project purpose: Not answered.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Not answered.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: Not applicable.

J. MATERIALS PURCHASABLE:
1. 4th grade-Ecology, EIS-McGraw Hill, $24.50 (class of 30).
2. 9th grade-Environmental Science, ISCS-Silver Burdett.
3. 11th and 12th grades-Modern Earth Science, Holt - $5.61.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: EIS-4 schools, ISCS-1 school, Earth Science-1 school.
2. Number of teachers having adopted all of the project materials: EIS-12 teachers, ISCS-1 teacher, Earth Science-1 teacher.
3. Number of teachers using some of the project materials: Not answered.
4. Total number of students using project materials: 550.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. EIS-4th grade, Brookwood Forest Elementary School, Cherokee Bend Elementary School, Crestline Elementary School, Mountain Brook Elementary School, c/o Mountain Brook Board of Education, P.O. Box 9036, Mountain Brook, Alabama 35213.

b. ISCS-9th grade, Mountain Brook Junior High School,
205 Overbrook Road, Mountain Brook, Alabama 35213.
c. Modern Earth Science, Mountain Brook High School,
3650 Bethune Drive, Mountain Brook, Alabama 35223.
d. Nature Trail, Brookwood Forest Elementary School,
3701 S. Brookwood, Mountain Brook, Alabama 35223.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: On request.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 3 days - in the summer.
   b. Summer Institute: Not answered.
   c. Evening classes: No.
   d. Others: Not answered.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. We use teacher manuals, student materials and equipment for teacher preparation. These are from the publishers indicated previously.

6. Commercial availability of materials: Already indicated.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: No, but we are presently having group discussions with teachers, students, psychologist, and other science educators about the "goodness" of EIS and ISCS.

2. Pertinent published research studies: None to date.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:

We plan to organize a trip to Maryville College (Tennessee) in environmental study areas. This will accommodate approximately 150 students, most of whom will be 11-12 years of age with a sprinkling of 9th graders and senior high students, plus parents and teachers.

A. PROJECT TITLE: UNIVERSITY OF ALABAMA ARBORETUM

B. PROJECT DIRECTOR: Dr. Frederick C. Gabrielson, Box 1927, Tuscaloosa, Alabama 35486. (205)348-5960

C. PROJECT HEADQUARTERS:
1. East 15th Street, Tuscaloosa, Alabama 35401.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 3 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Dr. J. H. Walker, Dr. E. S. Patton.
2. Date and place of Initiation: September 1957 - Tuscaloosa, Alabama.
3. Overall purpose: Conservation and service to University and community.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Conserve natural woodland.
   b. Collect exotic plants.
   c. Provide education for all levels.
   d. Aesthetic considerations.
   e. Research and training.
   f. Field trips.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: ENVIRONMENTAL INTERPRETATION AND EDUCATION - NATIONAL PARK SERVICE

B. PROJECT DIRECTOR: J. Thomas Ritter, P.O. Box 2252, Anchorage, Alaska 99501. (907)277-8548

C. PROJECT HEADQUARTERS:
1. P.O. Box 2252, Anchorage, Alaska 99501.
2. Special facilities or activities available for visitor viewing: Yes. Pilot projects in environmental study areas.

D. PRINCIPAL STAFF: No full time persons employed.

E. PROJECT HISTORY:
1. Principal originators: National Park Service, U. S. Forest Service.
2. Date and place of Initiation: October 1969.
3. Overall purpose: Not answered.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Not answered.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using your entire program: 15.
2. Number of teachers having adopted all of your project objectives: 30.
3. Number of teachers using some of the program: 30.
4. Total number of students using all of the program: 600.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught:
    a. West High School, 1700 Hillcrest Drive, Anchorage, Alaska 99503.
    b. East High School, 4025 East 24th Avenue, Anchorage, Alaska.
    c. Susitna Elementary School, 1750 Broadview Drive, Anchorage, Alaska.
    d. Chinook Elementary School, 3101 West 88th Avenue, Anchorage, Alaska.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 1 day.
   b. Summer Institute: Yes. 2 weeks.
   c. Evening classes: Yes. Tri-semester.
   d. Others: Resource directory for teachers; Advisory Council composed of government agencies.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: None locally produced.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Advisory Committee organized October 1969.

2. Organized teacher training class at University of Alaska.

3. Began compiling resource dictionary on environmental education materials and names of resource specialists.

4. Coordinated summer school program for instruction at environmental study areas.

5. Conducted joint-agency workshops for teachers.

6. Presented information on environmental education at State Teachers Convention.

P. PLANS FOR THE FUTURE:

1. Teacher Training - Instruction by resource management specialists.

2. Environmental Study Areas - Develop park-study area sites for most schools.

3. Instructional materials - Produce films, film strips, publications related to Alaskan ecosystem.

(NOTE: According to information received October 16, 1972, this project is no longer in existence).

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Edward J. Cunningham, 1250 Glacier Avenue, Juneau, Alaska 99801. (907)586-3915

C. PROJECT HEADQUARTERS:
1. 1250 Glacier Avenue, Juneau, Alaska 99801.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 1 coordinator. Persons for running camp are employed for six weeks. High school students serve as counselors.

E. PROJECT HISTORY:
1. Principal originators: Not answered.
2. Date and place of Initiation: 1969.
3. Overall project purpose: Provide students with a better knowledge and appreciation of their environment and to provide them an opportunity to live and work together.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To increase knowledge and appreciation of environment and a responsibility on the student's part toward the use of it.
2. New instructional materials being produced: Yes. K-6th grades.

H. MATERIALS PRODUCED:
1. K-6:
   a. Curriculum Guide.
   b. Outdoor School Field Study Guide.
2. 7-12: Not answered.
3. Others: As a resource person I teach lessons and demonstrate in various classrooms. I also plan field trips.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Video tape on the program at the camp.
2. Development of other materials anticipated: Video tape various lessons that are successful to save time.

L. PROJECT IMPLEMENTATION:
1 - 5. The curriculum guide is being readied for distribution and a questionaire is being prepared for teachers. A pilot project including teacher workshops and teacher preparation is being developed; (visitation) sites on school grounds are being established.
6. Names and locations of schools where the course is being taught: Pilot project at Glacier Valley Elementary School, 1250 Glacier Avenue, Juneau, Alaska 99801.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 15 hour. During the year, the State and National Forest Service put on workshops.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Workshops are presented by Forest Service during the year. The State Environmental Education Specialist put on a workshop in April of 1972.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. 1969 - Started program, 7th grade camp.
2. 1970 - Started Advisory Committee, 6th grade camp, workshop for teachers.
3. 1971 - Hired Environmental Education Coordinator, advisory group expanded.

P. PLANS FOR THE FUTURE:

1. Build community involvement and more teacher involvement.
2. Extend program K-12.
3. Increase curriculum and teacher training.
4. Extend camp participation beyond only 6th grade.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION PROGRAM

B. PROJECT DIRECTOR: Peter E. Larson, P.O. Box 744, Soldotna, Alaska 99669. (907)262-4112

C. PROJECT HEADQUARTERS:
1. P.O. Box 1266, Soldotna, Alaska 99669.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 4 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Mr. Paul Fisher, Mr. Boyd Schaeffer, Mr. John Galea.
2. Date and place of Initiation: Fall 1969 - Kenai, Alaska.
3. Overall project purpose: Assist participants in becoming knowledgeable concerning the biophysical environment and associated problems, aware of how to help solve these problems, and motivated to work toward their solution.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. To assist the participants in acquiring a basic understanding of concepts that support and undergird the philosophy of spaceship earth.
    b. To assist the participants in developing a concern for the quality of the biophysical environment and a motivation to help resolve environmental problems.
    c. To assist the participants in developing critical thinking and action skills necessary for them to help prevent and solve environmental problems. Specifically, the program is designed to assist participants in acquiring the ability to identify central issues, recognize underlying assumptions, evaluate evidence or authority, and draw warrented conclusions.
    d. A second important skill in which the program is designed to develop is problem solving. The problem solving procedure consists of the following phases: defining the environmental problem or issue, becoming informed about the problem, stating the alternative solutions, developing a plan of action and implementing the plan of action.
    e. A third important skill in which the program is designed to develop is change strategy. Once the participant has defined the issue, collected and evaluated relevant information and drawn warrented conclusions, he should have political insight for instituting the solution.
2. New instructional materials being produced: K-12th grades.

H. MATERIALS PRODUCED:
1. K-6: Guides for the development of environmental inventories, environmental experiences, and environmental simulation games.

Tests include semantic differential, situation analysis, and picture analysis awareness indicator.
2. 7-12: Same as K-6.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: All materials available through the Alaksa State Department of Education.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 4.
2. Number of teachers having adopted all of the project materials: 20.
3. Number of teachers using some of the project materials: 80.
4. Total number of students using project materials: Not answered.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Seward Elementary School, P.O. Box 427, Seward, Alaska 99664.
    b. Ninilchik High School, P.O. Box 37, Ninilchik, Alaska 99639.
    c. Soldotna Junior High School, P.O. Box 1070, Soldotna, Alaska 99669.
    d. Soldotna Elementary School, P.O. Box 547, Soldotna, Alaska 99669.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 15 hours.
    b. Summer Institute: Yes. 3 weeks.
    c. Evening classes: Yes. 1 semester.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
The Environmental Education Program was initiated by a five week workshop during the summer of 1970. During the ensuing year the techniques learned by the participating teachers were put to use. Workshops were planned and carried out during the school year in order to reinforce and complement the summer activities. Similar summer and school year activities for the 1971-72 school year were accomplished. Emphasis is placed on the inquiry method and using

the individual's environment as a means of teaching subject matter material through an interdisciplinary approach.

P. PLANS FOR THE FUTURE:

The summer institute will continue to be a part of the program with workshops during the year. These workshops will include curriculum development, methods of teaching, methods of evaluation, and a study of contemporary environmental issues and problems.

A. PROJECT TITLE: PROJECT OUTREACH

B. PROJECT DIRECTOR: Lyman L. Jackson, Coordinator; Phoenix Union High School System, 2042 W. Thomas Road, Phoenix, Arizona 85015. (602)271-0123

C. PROJECT HEADQUARTERS:
1. 2042 W. Thomas Road, Phoenix, Arizona 85015.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 2 persons regularly employed, 4 persons part time.

E. PROJECT HISTORY:
1. Principal originators: Phoenix Union High School District, Arizona Department of Public Instruction.
2. Date and place of Initiation: Phoenix, Arizona. August 1969.
3. Overall project purpose: Development of instructional resources for teacher use in environmental education in grades K-12 on an inter-disciplinary approach.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. To provide an awareness of ecologic problems and a concern for total environment.
    b. To provide an awareness of how social, cultural, economic, political and aesthetic values relate to ecological and environmental control.
    c. To provide an awareness that man is a part of the environment and not set aside from the environment.
    d. To provide a realization of how people may work to control the environment.
2. New instructional materials being produced: Yes. For grades K-8.

H. MATERIALS PRODUCED: In progress.

I. MATERIALS AVAILABLE FREE: Descriptive brochure of the activities of Project Outreach.

J. MATERIALS PURCHASABLE: None at present.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: None at present.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Will be available.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 semester.
    b. Summer Institute: Yes. 1 week.
    c. Evening classes: Yes. 1 semester.
    d. Others: Not answered.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:
    1. Teacher training.
    2. Environmental Reference Library.
    3. Auditorium programs.
    4. In-service workshops for adult and youth leaders.
    5. School assembly programs.
    6. Career day programs.
    7. Environmental clubs.
    8. Mini course.

A. PROJECT TITLE: EMERGENCY SCHOOL ASSISTANCE PROGRAM, COMMUNITY GROUPS

B. PROJECT DIRECTOR: Rev. L. V. Gibson, 236 Ash Street, Forrest City, Arkansas 72335. (501)633-7743

C. PROJECT HEADQUARTERS:
   1. 221 N. Rosser Street-Rm. 9, Forrest City, Arkansas 72335.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 3 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Project Committee of the Forrest City Council on Human Relations-Rev. L. V. Gibson, Mr. Edward Rountree, Mrs. Louvenia Clark, Mrs. Delcenia Robinson, Mrs. Charles Hoglan, Mr. Bob Smith, Mrs. Arizona P. Suggs. Mrs. Lillie Jones.
   2. Date and place of Initiation: August 10, 1971 - Forrest City, Arkansas.
   3. Overall purpose: To aid in the process of full integration of the public schools in Forrest City, Arkansas.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: Tutoring program to aid slow learners, who are predominantly Black, in keeping pace with regular classroom activities. Drama program to aid community on coming face to face with problems in school integration.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE:
   Pictures, quarterly reports, annual report.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION: Not applicable.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
   Program was launched August, 1971 by a grant from HEW under the Emergency School Assistance Program/Community Groups. 25 tutors were hired, 13 degree teachers, 12 non-degree. Preliminary workshop for tutors was held prior to beginning of tutoring classes. 2 workshops have been held since. Consultant is used to conduct workshops. Classes are held each Saturday morning from 8 to 12.

Tutoring program terminated in May 1972. The drama productions began preparations in October 1971 and have presented two plays, "The Man Nobody Saw" and "Fences," to the public and community groups.

P. PLANS FOR THE FUTURE:

1. Plan to apply for refunding of tutoring and drama programs.
2. Plan to include recreation and school-home visitation-counseling for pupils who have been suspended or expelled from school.

A. PROJECT TITLE: AREA III SCIENCE PROJECT: EDUCATIONAL PRIORITIES FOR THE SEVENTIES

B. PROJECT DIRECTOR: Charles Wiederhold, 1230 High Street, Auburn, California 95603. (916)885-7031

C. PROJECT HEADQUARTERS:
1. 1230 High Street, Auburn, California 95603.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: Director is employed part-time plus 5 part-time consultants.

E. PROJECT HISTORY:
1. Principal originators: 13 county superintendents of schools in northern California plus the project director and a task force.
2. Date and place of Initiation: September 1971 - Auburn, Calif.
3. Overall purpose:
    a. In-service training of teachers in Environmental Studies.
    b. Inquiry teaching strategies.
    c. Ecology.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To provide a coordinated area-wide in-service program that will bring about greater teacher understanding of:
    a. The nature of science - focusing on ecology.
    b. Teaching strategies, skills and methods.
    c. Dissemination skills.
2. New instructional materials being produced: Yes. Grades K-12; simulation games, teacher in-service and activities.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12: None.
3. Others: Environmental quality checklist, blueprint.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
300 teachers are using some of our materials.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1-3 days.
    b. Summer Institute: Yes. 2 weeks.
    c. Evening classes: No.
    d. Others: Planned for future.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: Some.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes.
2. Pertinent published research studies: Regional in-service model - Dr. Rolf Godon.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Entirely dependent upon funding.

A. PROJECT TITLE: (ENVIRONMENTAL AWARENESS)

B. PROJECT DIRECTOR: James N. Parks, 2060 Short Drive, Hanford, California 93230. (209)582-9009

C. PROJECT HEADQUARTERS:
1. Davis and Grant Street, Hanford, Calif. 93230; (209)584-5561
2. Special facilities or activities available for visitor viewing: Being developed.

D. PRINCIPAL STAFF: None.

E. PROJECT HISTORY:
1. Principal originators: James N. Parks, Principal, Roosevelt School; Herbert Barry, Head of Science Department, Hanford High School; Charles Obert, King County Superintendent of Schools Office.
2. Date and place of Initiation: 1966.
3. Overall project purpose: To teach an appreciation for the environment in which we live and the role of man in interacting with the laws of nature. To make children aware of their surroundings, and to stimulate curiosity as well as spark interest in young minds. To make teachers better able to teach - to open eyes and minds.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Not answered.
2. New instructional materials being produced: 5th and 6th grades, high school level and for teachers.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Not answered.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes. Weekend - also 3 unit college course.
    b. Summer Institute: Not answered.
    c. Evening classes: Not answered.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Available from

County Office, Kings County Superintendent of Schools. Book, MP film, film strips and slides.

6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION: No money for research or evaluation.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Started building on site nature center. All volunteer labor and donated materials.
2. Expanded 6th grade Environmental Education to include private schools in area.
3. Three University of California extension classes in area for teachers who are interested.

P. PLANS FOR THE FUTURE:

1. Completion of on-site (school site) nature center and museum.
2. Expansion of program to all grades K-6 throughout the district and eventually county.
3. Train a large number of teachers in how to teach Environmental Education.

A. PROJECT TITLE: MULTI-GRADED SUMMER SCHOOL CONSERVATION PROJECT
4-11th GRADES

B. PROJECT DIRECTOR: R. C. Read III, 2045 Vineyard Road, Novato, California 94947. (415)897-2111

C. PROJECT HEADQUARTERS:
  1. 1015 - 7th Street, Novato, California 94947.
  2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 7 teachers, 6 of them regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: R. Read, Norma Todd, Dick Melendy, David Lusk.
  2. Date and place of Initiation: 1969.
  3. Overall project purpose:
    a. To make students aware of environmental problems.
    b. To provide laboratory facilities for student projects related to conservation.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Students will be able to take positive steps in solving environmental problems.
    b. Students will take information and activities back to regular school classrooms for distribution.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
  1. K-6: Environmental newspaper as monthly flyer sent home with students.
  2. 7-12: Environmental newspaper.
  3. Others: California State Project written 1970. Will be printed and distributed by State Department of Education.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: No reply.
  2. Number of teachers having adopted all of the project materials: No reply.
  3. Number of teachers using some of the project materials: Unknown.
  4. Total number of students using project materials: 400 +.
  5. Totals stated are estimated.
  6. Names and locations of schools where the course is being taught: San Marin High School, San Marin Drive, Novato, California 94947.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: No.
3. Pre-service training program for teachers desiring to use the materials: Yes. 4 in-service days with substitutes paid.
4. Kinds of teacher preparation programs available:
    a. Workshops: No.
    b. Summer Institute: Not answered.
    c. Evening classes: Not answered.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: No.

A. PROJECT TITLE: CONSERVATION EDUCATION SERVICE, CALIFORNIA DEPARTMENT OF EDUCATION

B. PROJECT DIRECTOR: Rudolph J. H. Schafer, Consultant in Conservation Education, 721 Capitol Mall, Sacramento, California 95814.
(916)445-8010

C. PROJECT HEADQUARTERS:
1. 721 Capitol Mall, Sacramento, California 95814.
2. Special facilities or activities available for visitor viewing: No. Visitors are welcome at our office to discuss programs and review materials on file.

D. PRINCIPAL STAFF: 3 persons employed regularly, 2 part-time student interns.

E. PROJECT HISTORY:
1. Principal originators: State Senate in 1966 recommended that the Department of Education take action to improve conservation education program.
2. Date and place of Initiation: December 1967.
3. Overall project purpose: Development and implementation of a state environmental leadership program.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Provide consultant services to local educational agencies and county agencies.
   b. Develop materials for use by school agencies.
   c. Organize and develop county resources.
   d. Conduct teacher training programs.
   e. Evaluate local, district, and state-level programs.
2. New instructional materials being produced: Yes. K-12.

H. MATERIALS PRODUCED:
1. K-6: Not answered.
2. 7-12: Not answered.
3. Others:
   a. Ekistics--A Handbook for Curriculum Development in Conservation and Environmental Education.
   b. Handbook on California's Natural Resources.
   c. Report to the State Board of Education by the Conservation Education Advisory Committee.
   d. Bibliography of Films, Filmstrips, and Picture Sets.

I. MATERIALS AVAILABLE FREE: All above in limited quantities.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:

Most of our contacts are with district and county office level personnel, and we regularly work with the majority of those agencies in California. We receive a number of written requests for information from teachers and answer these also.

Schools where the course is being taught are:

1. Santee School District, P.O. Box 220, Santee, California 92071.
2. Santa Cruz School District, 701 Ocean Street, Room 200, Santa Cruz, California 95060.
3. Los Angeles City Schools, Laurel Ecology Center, 1044 N. Hayworth Avenue, Los Angeles, California 90046.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes. Indirectly.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 day.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes.
    a. Statewide school district and county office program evaluation underway.
    b. Los Angeles City is developing pupil evaluation instruments and data which we hope to use (Title III project).
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Instruction in wise use of natural resources and protection of the environment is required in all appropriate grade levels and subject areas, grades 1-12.
2. Education Code Sections utilizing in part language from the Advisory Committee Report recognizes the need for a coordinated statewide conservation-environmental education effort and pledges state government to support such a program.
3. A Conservation Education Service was created in the Department of Education to develop and maintain a statewide leadership program in this area involving the schools and other appropriate community agencies.
4. The State Superintendent of Public Instruction is authorized to make grants to various organizations for planning and implementing conservation education programs.
5. All state-adopted textbooks must emphasize wise resource use and environmental protection when appropriate.

P. PLANS FOR THE FUTURE:

1. Teacher Training. Develop and field test with 100 teachers a "teacher to teacher" training program. Modify and expand the program to train 1000 teachers.
2. Community Resources. Working with the Advisory Committee on Conservation Education to the State Board of Education and other community agencies, design and produce a plan to develop and utilize community knowledge and expertise in conservation education work at regional, state, county, and local level. Field test and implement the program.
3. Planning. Develop a specific conceptual plan for meeting the Education Code requirements that this subject be taught in appropriate grade levels and subject areas, grades 1-12. Print and distribute the plan to selected school districts and work with these agencies in implementing it.
4. Materials. Improve the quality of conservation teaching materials by working with governmental agencies, private industry, and citizen conservation groups.
5. Evaluation. Conduct expanded testing program in selected school districts using modified and improved test instrument. Develop self-evaluation methods to determine the effectiveness of educational programs carried out by educational, governmental, and community support agencies and assist these agencies in using these instruments.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION: A TEACHER'S GUIDE WITH INQUIRY AND VALUE SEEKING STRATEGIES

B. PROJECT DIRECTOR: Dr. Jimmy Frances Phelps, 9625 Cuyamaca Street, Santee, California 92071. (714)448-2510

C. PROJECT HEADQUARTERS:
1. 9625 Cuyamaca Street, Santee, California 92071.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: None.

E. PROJECT HISTORY: Not answered.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To produce and distribute a teacher's guide in environmental education with inquiry and value seeking strategies.
2. New instructional materials being produced: Yes. Grades 1-12.

H. MATERIALS PRODUCED:
1. K-6: Not answered.
2. 7-12: Not answered.
3. Others: Environmental Education: A Teacher's Guide With Inquiry and Value Seeking Strategies.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: The guide can be purchased for $2.28 per copy.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1 - 4: Not answered.
5: Approximately 850 guides have been distributed. I do not know how many of these are being used actively with students.
6. Names and locations of schools where the course is being taught: Carlton Oaks School, P.O. Box 220, Santee, California 92071.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: In process. Mrs. Julianna Hamann, author of the guide, has a research project in process. She may be contacted at the Santee School District address.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
In the spring of 1970, an environmental education conference was hosted for San Diego County by the Santee School District. Based on materials produced during the conference, the district obtained an Environmental Education Grant from the State of California to finance the writing and printing of the environmental education guide in 1971. The first 1,000 copies were paid for by the grant and were distributed free upon request.

P. PLANS FOR THE FUTURE: None.

A. PROJECT TITLE: SCICON - CLEMMIE GILL SCHOOL OF SCIENCE AND CONSERVATION

B. PROJECT DIRECTOR: Charles K. Rich, Route 2, Box 178, Springville, California 93265. (209)732-5511 ext. 386

C. PROJECT HEADQUARTERS:
   1. Springville, California 93265.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 26 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Tulare County Superintendent of Schools office.
   2. Date and place of Initiation: 1958 at rented site, 1962 at present site.
   3. Overall project purpose:
      a. Environmental Education resident school for 6th grade (and other) students in Tulare County.
      b. To provide opportunities for the acquisition of knowledge, understanding, awareness and appreciation of man's environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: Not answered.
   2. New instructional materials being produced: 6th and college level.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Source Book for the Scicon Day Trip.
      b. Report on the Springville Area.
      c. Development of Independent Thinking Through Elementary Science.
      d. Nature Games.
      e. Three Methods of Sighting A Newtonian Equatorial Reflector on a Sky Object.
      f. What Eyepieces to use with Newtonian Equatorial Telescope.
      g. Voice Choir.
      h. Earth Science of Tulare County.
      i. Reptiles and Amphibians of Tulare County.
      j. Key to Wildflowers.
   2. 7-12: None.
   3. Others:
      a. Geology of the Sierra Nevada.
      b. Intern Handbook.
      c. Growth Characteristics of Children Likely to Be Found at Scicon and the Implication for Their Learning.
      d. Counselor Handbook.

   e. "This is Scicon" - film.
   f. Suggested reading list.
   g. Scicon Master Plan.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
     Condensation of Scicon Master Plan.
  2. Development of other materials anticipated:
     a. Teachers Guide for Environmental Education (to include the week trip to Scicon).
     b. Environmental Education summer school project and plans.

L. PROJECT IMPLEMENTATION:
  1-5: Not answered.
  6. Names and locations of schools where the course is being taught: Scicon, Route II, Box 178, Springville, California 93265.

M. TEACHER PREPARATION:
  1. Consultative service available for teachers using the materials: Yes.
  2. In-service education program for teachers using the materials: Yes.
  3. Pre-service training program for teachers desiring to use the materials: Yes.
  4. Kinds of teacher preparation programs available:
     a. Workshops: Yes. 3 days.
     b. Summer Institute: Yes. 5 weeks.
     c. Evening classes: No.
     d. Others: Seminars (2 hours each) during each week the teachers are at Scicon with their students.
  5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
  6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION:
  1. Has the effectiveness of the program been evaluated: Yes. Evaluation committee under the Tulare County Department of Education and the Tulare County Board of Education; also, Porterville Elementary School District and Dinuba City Schools. Each week the teachers and counselors evaluate their week.
  2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
  We operate 33 weeks during the school year.
  1. 3,000 6th grade students per year attended for one week trip.
  2. 3,000 5th and 6th grade students per year attended for one day trip.
  3. 1,000 6th grade students per year attended for weekend.
  4. 350 high school students per year participated as counselors.
  5. 100 teachers per year brought classes.

6. 13 college students per year spent one school year as Interns in Conservation, receiving units of credit from their colleges throughout the United States.
7. CCSS (NSF) projects in Field Environmental Education with California State, Bakersfield, for teachers (high school science) each summer.

P. PLANS FOR THE FUTURE: Yes.

A. PROJECT TITLE: PLAINS CONSERVATION CENTER: ENVIRONMENTAL AND HISTORICAL OUTDOOR EDUCATION PROGRAM

B. PROJECT DIRECTOR: Edward Butterfield, 1085 Peoria Street, Aurora, Colorado 80010. (303)364-3331

C. PROJECT HEADQUARTERS:
1. Colorado Highway 30 and East Hampden Avenue, Arapahoe County, Colorado.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Dr. John C. Johnson, Mr. Eugene H. Herrington, Mr. Edward E. Butterfield.
2. Date and place of Initiation: August, 1970.
3. Overall project purpose: To enrich classroom concepts concerning: Man's responsibility as a guardian of his environment; the relationship of all living things to their environment; and the survival problems the early settler faced in this new frontier.

F. PRESENT COMMERCIAL AFFILIATION: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop an awareness of our natural and historical heritage as it relates to the development of the American Plains.
   b. To develop an awareness of conservation problems as they relate to past, present and future activities of man in this region.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: A suggested guide of field activities for Grades K-12 is being developed.
2. Development of other materials anticipated:
   a. Trail guides.
   b. Project guides.
   c. Museum.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 60.
2. Number of teachers having adopted all of the project materials: 200.
3. Number of teachers using some of the project materials: 50.

4. Total number of students using project materials: 15,000/yr.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Classes are bussed from individual schools to the center for instructional purposes.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 3 hours.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: Prior to visit to the center, teachers are consulted on an individual basis.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By individual teachers using the center.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Field Activities K-12: Plant survey, insect survey, bird study, mammel study, soil study and geology.
2. Plant and Animal Ecology: Conservation and farming, art and creative writing.
3. Pioneer Living Activities K-12: Housing, schooling, Indian living and cooking.

P. PLANS FOR THE FUTURE:
1. Increase usage by disciplines other than science and history.
2. Development of nature trails.
3. Development of additional building facilities (dormitory, museum, etc.)

A. PROJECT TITLE: ENVIRONMENTAL STUDIES PROJECT

B. PROJECT DIRECTOR: Robert E. Samples, John F. Thompson, Box 1559, Boulder, Colorado 80302. (303)447-8150

C. PROJECT HEADQUARTERS:
   1. 900 28th Street, Boulder, Colorado 80302.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 13 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originator: Robert E. Samples.
   2. Date and place of Initiation: Fall, 1968. Boulder, Colorado.
   3. Overall project purpose:
      a. Increase openness and humanistic education in schools.
      b. Provide a way for students to learn almost all subject matter from their immediate environment.
      c. Increase student self-esteem and self-image.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: Same as E - 3.
   2. New instructional materials being produced: Yes. First grade through graduate school.

H. MATERIALS PRODUCED:
All materials have been tested from first grade through graduate school and are intended for those grade levels. Materials are: Packets 1 and 2 - 50 assignment cards that are multi-disciplinary invitations to explore and learn from your immediate environment plus a teacher's non-guide ESSENCE-ESSENSE.
Packets 3 and 4 - 25 assignment cards related to interpersonal relations, 40 extension cards to be used with Packets 1 and 2. ESSENSE 2 - a teacher's work book, classroom poster for student plotting of their extension activities.

I. MATERIALS AVAILABLE FREE: Newsletter - Sensorsheet - published 4 times a year.

J. MATERIALS PURCHASABLE:
   1. Packets 1 and 2 - $10.00 for the set.
   2. Packets 3 and 4 - $10.00 for the set.
   3. Poster packet - 10 posters related to attitudes characteristic of openness and humanistic education - $4.00 for the packet.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: Packets 5 and 6 - content materials which will relate ES to already existing curriculum materials in all subject areas.

2. Development of other materials anticipated: Film to be used in workshops - subject: core personalities as they relate to personal affairs and the classroom

L. PROJECT IMPLEMENTATION:

We have no record of how many schools/teachers are using our materials but have sold 4025 set of packets 1 and 2 to individuals, schools, school districts and colleges. The answers to Project Implementation questions therefore refer to our formal testing program only.

1. Number of schools now using entire set of materials: 55.
2. Number of teachers having adopted all of the project materials: 83.
3. Number of teachers using some of the project materials: 83.
4. Total number of students using project materials: 4,650.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
    a. Eagle Rock High School, 1750 Yosemite Drive, Los Angeles, California 90041 - James Gladson.
    b. Benjamin Franklin High School, 116th and Pleasant Streets, New York, New York 10029 - Lloyd Sherman, Judy Scott.
    c. Cooper Upper Grade Center, 1645 W. 18th Place, Chicago, Illinois 60680 - Leonard Keller.
    d. Mitchell Elementary School, 1325 E. 32nd Avenue, Denver, Colorado - Audrey Barr, Beth Grix.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Only for our test center teachers on consultant basis to school districts.
3. Pre-service training program for teachers desiring to use the the materials: Only on consultant basis to colleges.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 2 hours minimum to 2-3 days maximum.
    b. Summer Institute: No..
    c. Evening classes: No.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not yet.
6. Commercial availability of materials: Not yet.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: It is currently being formally evaluated by Robert E. Lepper, Ph.D., of our staff.
2. Pertinent published research studies: The evaluation is largely in the area of the affective for which there is little published research.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. 1969-70: informal testing of pilot materials.
2. Summer 1970: leadership-writing conference.
3. 1970-71: formal testing of ES materials, production of ES Packets 1 and 2.
4. Summer 1971: writing conference.
5. 1971-72: formal testing of ES materials, production of ES Packets 3 and 4.
6. A great deal of workshop presentation - activity for teacher groups, school systems.

P. PLANS FOR THE FUTURE:

1. Production of packets 5 and 6, films and additional audio-visual materials.
2. Summer 1972 - leadership conference.
3. Teacher preparation in connection with several teacher training institutions.

A. PROJECT TITLE: THE MOUNTAIN VIEW CENTER FOR ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Dr. David Hawkins, 1511 University Avenue, Boulder, Colorado 80302. (303)443-2211 Ext. 8421

C. PROJECT HEADQUARTERS:
1. 1511 University Avenue, Boulder, Colorado 80302.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 8 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Dr. David Hawkins.
2. Date and place of Initiation: July 1, 1970.
3. Overall project purpose: To help schools evolve toward better education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. In collaboration with consultants and principals, and independently, we plan to arrange workshops to be held at the Center. They can be responsive to particular needs of teachers and may give special emphasis to science, mathematics, reading and writing, art, music and social studies.
    b. We hope to visit and work with teachers in their classrooms if both they and we feel that we can help in providing materials, in organization and planning, or in work with groups of children.
    c. We hold firm ideas about ways in which children and teachers can make use of the environment in which they live. The initiative for exploring and using the resources must be local and must evolve through the work of children and teachers and those who help and support them.
2. New instructional materials being produced: No. We use quite ordinary materials, sometimes in new ways, for pre-school through sixth grade.

H. MATERIALS PRODUCED:
1. K-6:
    a. Science Equipment in the Elementary Schools.
    b. The Logic of Action.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE:
Various short articles and pamphlets on elementary school teaching written by our staff and associates.

J. MATERIALS PURCHASABLE:

1. Science Equipment in the Elementary Schools can be purchased from the Mountain View Center for Environmental Education, 1441 Broadway, Boulder, Colorado 80302. Price $1.00.

2. The Logic of Action can be purchased from same at a cost of $3.00.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: A film on a Nursery School in Newcastle-on-Tyne, England. We have begun to publish a periodical, OUTLOOK, which appears three times a year, autumn, winter and summer, and is available to any interested teacher at a cost of $2.00 a year.

2. Development of other materials anticipated: We are not developing materials for use in classrooms except incidentally to our work as advisers. We will undoubtedly be working out designs for such things as animal cages, various simple musical instruments, etc. At this point we cannot specify precisely what these will be, but any designs we arrive at can be made available to others.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Not answered.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. Time varies.
   b. Summer Institute: Occasionally. 2 - 4 weeks.
   c. Evening classes: Occasionally. Open-ended.
   d. Others: A considerable part of our work takes place in classrooms as teachers request our help. There are no limits set in advance on the extent of these commitments.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Reprints of articles on various aspects of science teaching and education more generally are available. They include:
   a. Ojo de Dios.
   b. Is It a Conglomerate?
   c. One Blue Jay.
   d. Piaget Re-discovered.
   e. Away from Stages.
   f. Drops and Streams.
   g. Report of 3 days Spent in Washington, D.C.
   h. Photographs of Deaf Children in Nursery School.
   i. Thermodynamics of Purpose.
   j. On Understanding the Understanding of Children.
   k. Square Two--Square Three.
   l. Education and the Spirit of Science.
   m. Mind and Mechanism in Education.

n. Messing About in Science.
o. The Bird in the Window.
p. Statement of Environmental Education.
q. I-Thou-It.
r. The Nature of Purpose.
s. On Living in Trees.
t. Pendulums.

6. Commercial availability of materials: Single copies can be obtained without charge by interested individuals who write to the Mountain View Center.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Summer conference, 1970, of invited teachers, administrators and program developers from the United States, England and New Zealand.
2. Open houses for teachers each Monday afternoon.
3. Courses given by individual staff members, covering such topics as environmental studies, an introduction to music, batteries and bulbs, print-making, etc.--.
4. A course offered to University of Colorado freshmen entitled "The World of Childhood", attended by 24 students, meeting as a group once a seek and with individual staff members in small groups for specific projects once a week.
5. Cooperation with Ogalala Sioux Indians, Manderson, South Dakota in setting up a learning resource and teacher center.
6. Preparing for a series of workshops to be given on alternate Saturdays in Manderson by staff members.
7. Preparation of the periodical OUTLOOK.

P. PLANS FOR THE FUTURE:

Continued activities as above, with additional activities as the need arises.

A. PROJECT TITLE: HIGH TRAILS OUTDOOR EDUCATION PROGRAM

B. PROJECT DIRECTOR: Paul H. Forister, School District #11, 1115 N. El Paso, Colorado Springs, Colorado 80903. (303)633-8773 Ext. 205

C. PROJECT HEADQUARTERS:
1. Camp is located at Florissant, Colorado, Mr. Roger Sandborn, 80816.
2. Special facilities or activities available for visitor viewing: The camp itself, however, the facilities are not owned by the school district.

D. PRINCIPAL STAFF: District personnel are used - classroom teachers plus a staff furnished by High Trails Center.

E. PROJECT HISTORY:
1. Principal originators: Mr. Roger Sandborn, High Trails Education Center; Mr. Richard Holliday, 6th grade teacher; Mr. Thomas Doherty, Superintendent of Schools; Dr. William Liddle, Division of Elementary Education.
2. Date and place of Initiation: 1967.
3. Overall project purpose:
    a. Social goals in mixing economic, racial and educational differences.
    b. Individual growth opportunities - self-reliance, confidence, awareness, cooperation etc.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. Opportunity to teach and to learn greater understanding and love of natural surroundings in a setting where children of varied social and economic groups have an opportunity for new friends and to promote intercultural understanding.
    b. Living experiences that enhance citizen responsibilities, leadership and awareness of others.
    c. Direct experiences; field math, creative writing, conservation, local history, etc.
2. New instructional materials being produced: Yes. Revising 6th grade notebook. High school students - teacher/counselor notebooks.

H. MATERIALS PRODUCED:
1. K-6: Student notebook (6th) covering arts and crafts, rocks and minerals, language arts, conservation, field math, botany, animals and birds.
2. 7-12: 10-12 - Follows the same outline as the 6th grade notebook with additional counseling-work assignments.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:

1. *Student Notebook - Workbook.* $1.25.
2. Counselor Notebook - Workbook. $1.25.
3. Teacher Notebook - Workbook. $1.25.
4. Films and slides are available on a loan basis.

All materials are a cooperative effort between School District and High Trails Outdoor Education Center. Contact Paul H. Forister, 1115 N. El Paso, Colorado Springs, Colorado 80903.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed:
   a. Nature mobile.
   b. Updating slides and films.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 30.
2. Number of teachers having adopted all of the project materials: 100.
3. Number of teachers using some of the project materials: Not answered.
4. Total number of students using project materials: 2,800 6th grade students.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: The course is taught at the camp. Introduction and followup is taught in the classroom.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. Limited basis.
   b. Summer Institute: Not answered.
   c. Evening classes: Yes.
   d. Others: Nearby colleges offer off-campus outdoor education courses for credit - available to teachers in our district.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By parents, students participating, teachers/counselors, and high school student counselors.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1969 - 1,163 6th grade students.
- 2 classes special education.
- 62 classroom teachers.
- 252 high school students - 3 high schools.
- 7 one week sessions.

1970-71
- 2,000 6th grade students.
- 4 classes special education.
- 75 classroom teachers.
- 360 high school students - 3 high schools.
- 10 one week sessions.

P. PLANS FOR THE FUTURE:

1. Environmental - Ecology studies.
2. Nature trails.

A. PROJECT TITLE: BALARAT CENTER FOR ENVIRONMENTAL STUDIES

B. PROJECT DIRECTOR: Kenneth W. Horn, 1521 Irving Street, Denver, Colorado 80204. (303)266-2255

C. PROJECT HEADQUARTERS:
1. 1521 Irving Street, Denver, Colorado 80204.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 13 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Kenneth W. Horn and the Denver Public Schools.
2. Date and place of Initiation: January 1969.
3. Overall purpose: To provide an interdisciplinary environmental education program for all the children of the Denver Public Schools.

F. PRESENT COMMERCIAL AFFILIATIONS: None

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E-3.
2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
1. K-6:
    a. Field Guides for one-day experiences at the Balarat Environmental Center.
    b. Evaluation sheet of one-day field experiences.
    c. K-6 Environmental Education Packet for Urban Studies.
    d. Earth Week Activities.
    e. Brochure-"This is a Denver Public School Classroom."
2. 7-12:
    a. Field Guides for one-day experiences at the Balarat Environmental Center.
    b. Evaluation sheet of one-day field experiences.
    c. Grades 7-12 Environmental Education Packet for Urban Studies.
    d. Earth Week Activities.
    e. Brochure.
3. Others: Newsletter, informational one-sheet handouts on a variety of outdoor education topics.

I. MATERIALS AVAILABLE FREE:
All of those listed above except the One-Day Field Guide.

J. MATERIALS PURCHASABLE:
"One-Day Field Guide" - $1.75.
From - Department of Materials Control, Denver Public Schools,
414 Fourteenth Street, Denver, Colorado 80202.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed:
    a. A Four - Seasons Slide Presentation of the Montane Zone.
    b. A Slide - Stereo Tape Presentation of One-Day Field Experiences.
    c. Slide Presentation on How to Conduct Interdisciplinary Field Trips in the Urban Environment.
2. Development of other materials anticipated:
    a. Curriculum guide for urban environmental studies through each subject discipline.
    b. Curriculum guide for environmental experiences for the handicapped.
    c. Curriculum guide for five-day resident school experiences.
    d. Educational specifications for a five-day resident school program.
    e. Environmental Education - Leadership Training program for high school students.

L. PROJECT IMPLEMENTATION:

This is not applicable because it is not a course of study for the schools. 225 teachers and 50 schools have made the one-day field trip to the Balarat Environmental Center. Other materials are in preparation for use at the local school level.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 7 days.
    b. Summer Institute: No.
    c. Evening classes: Yes. 10 weeks.
    d. Others: Compensated In-service programs - 18 hours in length over a period of five weeks titled "Urban Environmental Studies". Teachers are paid for attending.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:

1. Master planning with Architectural Master Planning Team for facility development of the Balarat Environmental Center.
2. Curriculum development of multiple programs.
3. Further development of guides and curriculum for urban environmental study, K-12.
4. Pre-Laboratory and Post-Laboratory guides for one-day field experiences.

5. Community involvement and fund raising campaign through adult Balarat Council and Students for Balarat.
6. Expansion of the Students for Balarat Program.
7. Cooperation with the local County PTA for environmental studies programs in the schools.
8. Extension of the specially equipped buses for one-day field excursion program by the addition of two more buses, staff and alternate study sites.

A. PROJECT TITLE: HUMAN AND NONHUMAN ECOLOGY SEMINAR

B. PROJECT DIRECTOR: Daniel Van Gorp, 2951 South Race, Denver, Colorado 80210. (303)757-2822

C. PROJECT HEADQUARTERS:
1. 9300 E. Union, Englewood, Colorado 80110.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 18 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Daniel Van Gorp.
2. Date and place of Initiation: August 1969.
3. Overall purpose: Spend 1 week-10 days in isolated geographical setting in Roosevelt National Forest at Pingree Park (Colorado State University Forestry Campus). Use interdisciplinary approach in studying field ecology and influence of man. Also study another culture - Indian students from Pine Ridge, South Dakota, join Cherry Creek School students in discussing environmental problems - human relations input - students work together on projects, camp and live together.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To develop, through an interdisciplinary approach, an understanding of the types of interactions between man and the biotic and abiotic components of the environment and how man's behavior may influence natural and social problems.
2. New instructional materials being produced: Yes. Grades 10-12.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12: Curriculum guide, 8mm film and slides, tapes.
3. Others: None.

I. MATERIALS AVAILABLE FREE:
Course outline, description of program.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Slides, 8 mm color film and tape.
2. Development of other materials anticipated: Student guides, curriculum materials, field activities for students.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 8.

3. Number of teachers using some of the project materials: 8.
4. Total number of students using project materials: 30-40.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught: Cherry Creek High School, 9300 E. Union, Englewood, Colorado 80110.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: No.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. ½ day to 1 day.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: Briefing sessions.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By students and teachers.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Workshop - Summer 1969: Science and social studies teachers.
2. Workshop - Summer 1970: Included students and teachers of science, social studies and art.
3. Seminar - Summer 1971.
4. September 1971: Weekend (to winterize cabin) - 22 students and 6 teachers.

P. PLANS FOR THE FUTURE:

Expand multi-disciplinary approach - add math and English. Include 3-day urban ecology session discovering and discussing urban problems of metro Denver. Develop facilities in order to be winterized - students can spend a week in the mountains during the school year as an integral part of the curriculum - team teaching by staff members.

A. PROJECT TITLE: HUMAN ECOLOGY

B. PROJECT DIRECTOR: Daniel Van Gorp, 2951 South Race, Denver, Colorado 80210. (303)757-2822

C. PROJECT HEADQUARTERS:
1. 9300 East Union, Englewood, Colorado 80110.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 teachers regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Daniel Van Gorp, Mark Hampshire.
2. Date and place of Initiation: April 1970.
3. Overall project purpose: To develop an interdisciplinary course designed to develop an understanding of interactions with our fellow man and the biotic and abiotic components of our environment. Bring together science and social studies through a teaching team relating to environmental problems.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop, through an interdisciplinary approach, an understanding of the types of interactions between man and the biotic and abiotic components of the environment and how man's behavior may influence natural and social systems.
2. New instructional materials being produced: Yes. Grades 11-12.

H. MATERIALS PRODUCED:
1. K-6: Not applicable.
2. 7-12: a. Human Ecology 571.
   b. Basic Syllabus.
3. Others: None.

I. MATERIALS AVAILABLE FREE: Syllabus.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
   a. Revision of basic syllabus.
   b. Tapes and slides of special projects developed by students.
2. Development of other materials anticipated: Simulation and role-playing exercises.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 2.
3. Number of teachers using some of the project materials: 2.
4. Total number of students using project materials: 40.

5. Totals stated are definite.
6. Names and location of schools where the course is being taught: Cherry Creek High School, 9300 E. Union Street, Englewood, Colorado 80110.

M. TEACHER PREPARATION: None.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
This is not a funded project. The school district provided minimal monies to support two ambitious teachers who were interested in developing this course. They attended the Science and Society Conference BSCS - Boulder, Colorado in 1970 and a follow-up study in 1971. Many worthwhile ideas were received from these conferences. No funding was available.

P. PLANS FOR THE FUTURE:
Expand this program to include additional disciplines such as math, English and art.

A. PROJECT TITLE: EAST HIGH SENIOR SEMINAR

B. PROJECT DIRECTOR: Craig Spillman, East High School, 1545 Detroit Street, Denver, Colorado 80206. (303)388-5603

C. PROJECT HEADQUARTERS:
   1. 1545 Detroit Street, Denver, Colorado 80206.
   2. Special facilities or activities available for visitor viewing: Not answered.

D. PRINCIPAL STAFF: 5 persons employed full-time, 4 part-time.

E. PROJECT HISTORY:
   1. Principal originators: East High Seminar Staff.
   2. Date and place of Initiation: Spring 1970 - Denver.
   3. Overall purpose:
      a. Enlarge student understanding of real world problems and potential solution.
      b. Improve group interaction (multi-ethnic, multi-social and multi-economic).

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To sensitize youth to the needs and challenges of our complex, industrialized society.
      b. To help students learn to use the special methodologies of the various disciplines in analyzing, hypothesizing and drawing conclusions about real world situations.
      c. To enrich the student's understanding about his physical and social environment, its beauty, structure and potential.
      d. To help the student develop an understanding of the emergence and present dimensions of current American progress and problems, and to develop in them a posture towards positive change.
      e. To encourage college entrance for selected low achieving minority students, through exposure to campus experiences, college oriented counseling and remedial help in English, Reading, and Mathematics.
      f. To facilitate the breakdown of some of the barriers which cause human alienation common to our industrial society and evident within the school community.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: Evaluation.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Field experience education including:
1. Outward bound course in Mexico (desert ecology).
2. Space Technology and Man Module (urban ecology - pollution).
3. River expedition (river ecology).
4. Urban design module - design of physical city.

P. PLANS FOR THE FUTURE:
Repeat of seminar for senior students.

A. PROJECT TITLE: OUTDOOR LABORATORY SCHOOL

B. PROJECT DIRECTOR: Mr. Ralph Bartlett, Star Route #2, Box 275, Evergreen, Colorado 80439.

C. PROJECT HEADQUARTERS:
   1. Box 275, Evergreen, Colorado 80439.
   2. Special facilities or activities available for visitor viewing: Observation of teachers and children in an outdoor setting.

D. PRINCIPAL STAFF: 5 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Program developed by curriculum division, elementary principals and 6th grade teachers.
   2. Date and place of Initiation: 1953 at Gamma Phi Beta Camp, Indian Hills, Colorado.
   3. Overall project purpose: Provide 6th grade students with a resident curriculum oriented outdoor education program.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: Not answered.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
   1. K-6: Guide for 6th grade teacher use.
   2. 7-12: Not applicable.
   3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: Outdoor Education Guide, Division of Instruction, Jefferson County R-1, 809 Quail, Lakewood, Colorado 80215. $5.50.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: None.
   2. Development of other materials anticipated: Handbook for High School Student Leaders.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 64.
   2. Number of teachers having adopted all of the project materials: 175.
   3. Number of teachers using some of the project materials: Not answered.
   4. Total number of students using project materials: 5,300.
   5. Totals stated are estimated.
   6. Names and locations of schools where the course is being taught:

    a. Pennington Elementary School, 4645 Independence, Arvada, Colorado 80033.
    b. Foothills Elementary School, 13165 W. Ohio, Lakewood, Colorado 80228.
    c. Lasley Elementary School, 1401 S. Kendall, Denver, Colorado 80226.
    d. Wilmot Elementary School, Evergreen, Colorado 80439.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 2 days.
    b. Summer Institute: Yes. 10 days.
    c. Evening classes: No.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials: for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES: Not answered.

P. PLANS FOR THE FUTURE:
1. The use of high school students as leaders.
2. Providing environmental material for teachers of grade levels other than grade 6.

A. PROJECT TITLE: NORTHERN COLORADO OUTDOOR NATURE CENTER PROJECT

B. PROJECT DIRECTOR: Howard D. Bruner, 1300 Yount, Fort Collins, Colorado 80521. (303)482-4267

C. PROJECT HEADQUARTERS:
   1. Buford Plemmons, Poudre R-1 School District, Fort Collins, Colorado 80521.
   2. Special facilities or activities available for visitor viewing: Yes. Brochures, Guides, Slides.

D. PRINCIPAL STAFF: 1 Director and 3 graduate students, all part time.

E. PROJECT HISTORY:
   1. Principal originators: Arthur Wilcox, Howard Bruner.
   2. Date and place of Initiation: 1970.
   3. Overall project purpose: To involve students K-12 in real outdoor experiences in order to reconstruct values for living effectively in the world today and tomorrow.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. The student will develop sensory skills.
      b. The student will develop an awareness of the world.
      c. The student will develop an understanding of the physical and biological world.
      d. The student will know how to care for the environment.
   2. New instructional materials being produced: Yes. All grades.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Curriculum Guide.
      b. Activity Booklet.
      c. Trail Guide.
      d. Film Strips - Slides.
   2. 7-12:
      a. Curriculum Guide.
      b. Water - Soil Testing Manuals.
      c. Trail Guides.
      d. Activity Booklet.
      e. Instructional Slides.
   3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE:
   1. K-12 Curriculum Guide - $2.00.
   2. Activity Booklet - $1.50.
   3. Trail Guide - $1.50.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed:
    - a. Flora of Foothills.
    - b. Animals of Colorado.
    - c. Fine Feathered Friends of Fort Collins.
    - d. Monarch Butterfly Life Cycle.
    - e. Life Zones (Grasslands to Alpine).
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 10.
2. Number of teachers having adopted all of the project materials: 10.
3. Number of teachers using some of the project materials: 275.
4. Total number of students using project materials: ?
5. Totals stated are estimated.
6. Names and location of schools where the course is being taught: Not answered.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes. 1 day - 2 weeks.
    - b. Summer Institute: Yes.. 2 weeks.
    - c. Evening classes: Not answered.
    - d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Workshop programs.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: In the process of being evaluated.
2. Pertinent published research studies: Project termination next year.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Curriculum planning.
2. Teacher in-service training.
3. Interpreter pre-training.
4. Nature trail development.
5. Survey of environmental resources, local and regional.
6. Student involvement in curriculum guide themes.
7. Instructional materials (slides, tapes, etc.).

P. PLANS FOR THE FUTURE:

1. Continuous in-service training programs.
2. Instructional materials.
3. Summer workshops.
4. College credit courses.
5. Summer ECO classes for Junior-Senior High classes.
6. ECO clubs in schools.

A. PROJECT TITLE: TALCOTT MOUNTAIN SCIENCE CENTER FOR STUDENT INVOLVEMENT, INC.

B. PROJECT DIRECTOR: Donald P. LaSalle, Beechwood Lane, Bristol, Conn. 06010. (203)582-0889

C. PROJECT HEADQUARTERS:
1. Montevideo Road, Avon, Conn. 06001.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 11 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Francis Driscoll, Former Superintendent of Avon Public School; Donald P. LaSalle, Director TMSC-SI; George C. Atamian, Assistant Director TMSC-SI.
2. Date and place of Initiation: Began full-time operation in October 1967.
3. Overall project purpose: Essentially, a supplementary science program serving students in public, private and parochial schools, as well as university teaching. The areas of science are Astronomy, Chronobiology, Ecology, Meteorology, Radio-Electronics, Seismography, Computer Sciences and Geology.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To provide students with the equipment, activities and instructors necessary to study science as a process.
   b. To provide faculty and programs for academically gifted students.
   c. To initiate innovative teaching practices in schools and provide teacher training in the sciences described above for teachers at all level.
2. New instructional materials being produced: Intermediate grades.

H. MATERIALS PRODUCED:
1. K-6: Environmental Kit - produced under a grant from the Northeast Environmental Education Development Committee.
2. 7-12: Air Conservation Guide - emphasizing student involvement for grades K-9.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: The Air Conservation Guide will be ready in the spring of 1973. Approximately $3.00 for complete kit.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Hundreds of teachers are using some of the materials but other data is not known.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 10 two hour sessions.
    b. Summer Institute: Not answered.
    c. Evening classes: Yes. 10 two hour sessions.

5. Availability of preservice and/or in-service teaching materials for educators to use in preparing teachers: Not applicable.

6. Commercial availability of materials: Not applicable.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Dr. Joseph Renzulli, University of Conn., Storrs, Conn.

2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: "LIFE" - LIVING IN FAIRFIELD'S ENVIRONMENT

B. PROJECT DIRECTOR: Dr. Bette J. DelGiorno, 100 Reed Road, Fairfield, Connecticut 06430. (203)255-0421 Ext. 245

C. PROJECT HEADQUARTERS:

1. 100 Reef Road, Fairfield, Connecticut 06430.
2. Special facilities or activities available for visitor viewing: All facets of the project are still in development.

D. PRINCIPAL STAFF: 300 elementary school teachers and 15 secondary teachers employed. The project is a part of our regular program.

E. PROJECT HISTORY:

1. Principal originators: Dr. DelGiorno, Mrs. Harry Shaw (citizen), a few assistant principals, principals and interested teachers.
2. Date and place of Initiation: 1967 - Mrs. Shaw's portion - The Mill River Wetlands Study, now called The River Laboratory Study for grades 3-6. Project "Life" - 1969-70, Dr. DelGiorno.
3. Overall project purpose:
    a. To provide the opportunity to develop a relevant science curriculum around an environmental core.
    b. To provide the opportunity for the educational system and the community to work together in studying and solving environmental problems.

F. PRESENT COMMERCIAL AFFILIATIONS:

We have done some preliminary work with Oceanography Unlimited, Inc., Patterson, New Jersey.

G. PROJECT OBJECTIVES:

1. Objectives of the project:
    a. To gain insight into the environmental sciences.
    b. To gain an understanding of the basic concepts and processes of science through environmental studies.
    c. To gain skill in using instruments and techniques of particular importance to this study of the environment.
    d. To appreciate the value of the particular characteristics of the local environment in Fairfield.
2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:

Model structure for programs, subprograms, courses, units, and lessons have been developed for each aspect of the project.

1. K-6:
    a. School Yard Laboratory Study (K-6).
    b. River Laboratory Study (3-6).
    c. Animals and Their Environment.
2. 7-12: Science as an Integrated Ecological Study (7,8).
3. Others:
    a. Pollution Studies.
    b. Connecticut River Field Trip.
    c. Introduction to Environmental Studies (10,11,12).

I. MATERIALS AVAILABLE FREE:
Model structures for those listed under H.1 and H.2 are available free.

J. MATERIALS PURCHASABLE:
Slides and cassette tapes of field trips associated with Project "LIFE" will soon be available.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed:
    - a. Introduction to Marine Biology and Oceanography - 8mm film and taped cassette.
    - b. Ecology of the Marshes - 8mm film and taped cassette.
    - c. Field Trip on the Connecticut River - 8mm film and taped cassette.
    - d. Introduction to Project "LIFE" - 35mm slides and taped cassette.
2. Development of other materials anticipated:
We will continue to develop units and lessons for each subprogram and eventually will have a course for each grade level. We will also continue to develop films, slides and tapes for instructional purpose. We may also develop some video taped materials.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 16.
2. Number of teachers having adopted all of the project materials: 265.
3. Number of teachers using some of the project materials: Limited number presently.
4. Total number of students using project materials: 6,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    - a. Mill Hill School, Mill Hill Road, Fairfield, Conn. 06430.
    - b. Tomlinson Junior High School, Unquowa Road, Fairfield, Conn. 06430.
    - c. Ludlowe High School, Unquowa Road, Fairfield, Conn. 06430.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes - limited.
4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes. 15 hours.
    - b. Summer Institute: No.
    - c. Evening classes: No.
    - d. Others: After school - $1\frac{1}{2}$-2 hours.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. RETAL - The Research Team Approach to Learning - as a method and philosophy of science teaching.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. The River Lab Study has been evaluated. Others are in the pilot stage.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Mrs. Shaw began the Mill River Wetland Study about six years ago and it has developed into a four-tour package for 3rd, 4th, 5th, and 6th grade students. Other subprograms were initiated in 1969-1970 and thus far, only model structures and a few films and slides have been prepared for each. The program was completely revised during the summer of 1972 for grades 3-6 in the River Laboratory Study. The high school course, an Introduction to Environmental Studies, was developed during the summer of 1972 and is in its pilot year.

P. PLANS FOR THE FUTURE:

1. The Mill River Wetland Study field trip program has become the River Laboratory Study and presently pre-tour, field trip, and post-tour units have been developed for grades 3-6.
2. Other subprograms under Project "LIFE" will continue to be expanded. More units and lessons will be written. Films, slides, and cassettes will be prepared to accompany each subprogram. This will be accomplished through the cooperative efforts of the students, teachers, administrators, science consultant and interested citizens.
3. Introduce "Animals and Their Environment" for grades K-2.
4. Ecolab - a mobile environmental lab primarily for oceanographic studies will be developed.

A. PROJECT TITLE: ELIOT PRATT EDUCATION CENTER

B. PROJECT DIRECTOR: Daniel Hart, Paper Mill Road, New Milford, Connecticut 00706. (203)354-3665

C. PROJECT HEADQUARTERS:
1. Paper Mill Road, New Milford, Connecticut 00706.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Eliot Pratt Family.
2. Date and place of Initiation: 1968-New Milford, Conn.
3. Overall project purpose: Education for survival.

F. PRESENT COMMERCIAL AFFILIATIONS· None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Not answered.
2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
Beyond Your Classroom-"An Activity Guide".

I. MATERIALS AVAILABLE FREE:
Occasional materials on environmental problems and educational techniques.

J. MATERIALS PURCHASABLE:
Beyond Your Classroom-"An Activity Guide", available from center.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
   a. A guide to planning local sites.
   b. A movie on a case study environmental project.
2. Development of other materials anticipated: A series of publications on the Eastern Wooland Indians.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 50.
2. Number of teachers having adopted all of the project materials: 1,000.
3. Number of teachers using some of the project materials: 1,500.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. New Milford High School, New Milford, Conn. 00706.
   b. Brookfield Schools, Brookfield Center, Brookfield, Conn.
   c. Danbury Schools, Danbury, Conn.
   d. Sherman Schools, Sherman, Conn.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes. 3 hours each.
    - b. Summer Institute: No.
    - c. Evening classes: Yes.
    - d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes
    - a. Beyond Your Classroom-"An Activity Guide".
    - b. Water Ecology Study.
    - c. Environmental Activities.
6. Commercial availability of materials: Are being negotiated.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES: Not answered.

P. PLANS FOR THE FUTURE:
We hope to open a teacher center.

A. PROJECT TITLE: A. ELEMENTARY ECOLOGY B. OCEANOGRAPHY - HIGH SCHOOL

B. PROJECT DIRECTOR: Paul E. Peknik Jr., Science Coordinator, K-12,
195 Hillandale Avenue, Stamford, Connecticut 06901.
(203)348-5841 Ext. 433

C. PROJECT HEADQUARTERS:
1. Same as B.
2. Special facilities or activities available for visitor viewing: Yes. Arboretum.

D. PRINCIPAL STAFF: 4 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Walter Plant, Paul E. Peknik Jr., Grace Polizzotti.
2. Date and place of Initiation: Summer - 1968.
3. Overall purpose: Know more about Connecticut's environment, ecological problems and try to do something about them.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To familiarize students with the study of the Long Island Sound as an ecosystem.
   b. To illustrate the interrelationships of the sciences in the field of salt-water ecology.
2. New instructional materials being produced: Yes. Grades 1-6.

H. MATERIALS PRODUCED:
1. K-6: Curriculum Guides.
2. 7-12: None.
3. Others: Oceanography Guides.

I. MATERIALS AVAILABLE FREE: Guides.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Films, T-V tapes.
2. Development of other materials anticipated: Films, T-V tapes.

L. PROJECT IMPLEMENTATION:
14,000 students are using our materials.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available:
   - a. Workshops: Yes. 10 weeks - 10 sessions.
   - b. Summer Institute: Yes. 5 weeks.
   - c. Evening classes: No.
   - d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated· Yes. By the staff.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:

Open Space Ecology training project for teachers.

A. PROJECT TITLE: TOTAL EDUCATION IN THE TOTAL ENVIRONMENT (T.E.T.E.)

B. PROJECT DIRECTOR: William R. Eblen, P.O. Box 113, Wilton, Conn. 06897. (203)762-7270

C. PROJECT HEADQUARTERS:

1. P.O. Box 113, Wilton, Conn. 06897.
2. Special facilities or activities available for visitor viewing: Yes. Action Models (demonstration schools that are using the Total Environment Approach to Education).

D. PRINCIPAL STAFF: 5 persons regularly employed.

E. PROJECT HISTORY:

1. Principal originator: William R. Eblen.
2. Date and place of Initiation: August 1964 - Wilton, Conn.
3. Overall project purpose: To enable more people to develop an appreciation of their interdependence with their total environment and responsibility for the development of a culture that maintains that environment in a condition fit for living.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:

1. Objectives of the project:
    a. To stimulate and assist in the development of cooperative total environment education programs among community agencies, school systems, private concerns, and state and national governmental agencies.
    b. To encourage and assist school systems in the development of curriculum materials that stress a multidisciplinary approach to education.
    c. To demonstrate that a basic understanding of the natural ecosystem is necessary background for a study of the ecology of man.
    d. To demonstrate the relationships between ecological studies, social values, and personal attitudes and ethics.
2. New instructional materials being produced: Yes. K through Adult Education.

H. MATERIALS PRODUCED:

1. K-6: Total Environment Education Program: Unit 1 - The ABC's of Ecology. (Student Activity Manual, Teacher's Instructional Manual).
2. 7-12: Paperbacks: How Many Are Too Many?, Our Troubled Waters, The World's Exhaust, Mist of Death.
3. Others: K-12 Booklets: Total Education in the Total Environment, Pollution, T.E.T.E.
Educational Games: The Natural Ecosystem, The ABC's of Ecology, Eco-Balance, Soil, Food, Consumer, Recycle.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:

1. Paperbacks: Pendulum Press, Saw Mill Road, W. Haven, Conn. 06516. 95¢ each.

2. Booklets: T.E.T.E., Box 113, Wilton, Conn. 06897. $1.00 each.

3. Total Environment Education Program: Unit 1: Steck-Vaughn Company, P.O. Box 2028, Austin, Texas 78767.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed:
   - a. Paperbacks: Noise, The Unseen Enemy, Land and Trash, Our Wounded Land, Internal Pollution, The Body Breakers, and Ecology Primer.
   - b. Slide-tape modules of Total Environment-School-Community Workshops programmed for self-administering.

2. Development of other materials anticipated: Total Environment Education Program: Units 2,3,4,5.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 87.
2. Number of teachers having adopted all of the project materials: 1,000.
3. Number of teachers using some of the project materials: 1,500+.
4. Total number of students using project materials: 150,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   - a. Farnsworth Middle School, Guilderland, New York.
   - b. Arlington Junior High School, Poughkeepsie, New York.
   - c. The Miller School, Wilton, Conn.
   - d. Rogers High School, Rogers, Arkansas.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   - a. Workshops: Yes. 1 day to 10 days.
   - b. Summer Institute: Yes. 2 weeks.
   - c. Evening classes: No.
   - d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Background materials which relate the rationale and purpose of Total Environment-School-Community approaches; 8 paperbacks, 3 booklets, 7 educational games, overhead transparencies sets, base maps, training films, resource guides, and slide-tape presentations.
6. Commercial availability of materials: Yes. Previous commercial firms listed for some of the above mentioned items. Other materials available from the Environmental Arts and Science Division, Hudson River Museum, and the UNA Center Bookstore. (Museum in Yonkers, N.Y. and Bookstore at 833 United Nations Plaza, N.Y., N.Y. 10017).

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes.
   a. T.E.T.E. staff.
   b. Southern Conn. State College, Center for Interdisciplinary Creativity, New Haven, Conn.
   c. Arkansas State Department of Education.
   d. Conn. State Department of Education.

2. Pertinent published research studies: "Summated rating scale results indicating attitudinal changes in teachers exposed to the Total Environment Approach during an inservice workshop (August 1969) in New Hampshire." Total Education in the Total Environment, Norwalk, Conn., 1971.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. N.Y. State Council on the Arts Grant made to Hudson River Museum to enable T.E.T.E. to apply the Total Environment Approach in four selected communities along the Hudson River between N.Y.C. and Albany.

2. Title III Grant made by Conn. State Department of Education to expand T.E.T.E. throughout Conn.

3. Application of Total Environment Approach in all four Conn. State Teacher Training Colleges made possible by an E.P.D.A. grant.

4. The Hudson River Sloop Restoration (HRSR CLEARWATER) and T.E.T.E. expand cooperative environmental education experiences provided for pilot schools in New York State.

5. Arkansas State Department of Education funded under Environmental Education Act to train supervisory personnel at the state level and in selected key areas in the Total Environment Approach to Education (K-12).

6. Case Study of T.E.T.E. accepted for inclusion in the official library of the United Nations Conference on the Human Environment.

7. "The ABC's of Ecology": a nine-month exhibit co-sponsored by T.E.T.E. and the United Nations Association of the United States of America at the United Nations Plaza.

P. PLANS FOR THE FUTURE:

1. Expansion of existing Total Environment Approach applications in present model states.

2. Addition of Total Environment Approach applications in other parts of the United States and the world.

3. Increased production of instructional materials: books, pamphlets, films and other multi-media kits.

4. A series of two-day regional workshops throughout the United States and selected parts of the world for administrators and curriculum specialists.

A. PROJECT TITLE: OUTDOOR LABORATORY

B. PROJECT DIRECTOR: Catharine Y. Bonney, 83 E. Main Street, Newark, Delaware 19711. (302)731-2221

C. PROJECT HEADQUARTERS:
1. 83 E. Main Street, Newark, Delaware 19711.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Advisory Committee composed of staff and community.
2. Date and place of Initiation: February 1966.
3. Overall project purpose: This proposal will establish an Outdoor Laboratory consisting of nature trails to be developed within an existing park area. The program will include guided field trips, instruction, and the development of related materials for elementary and secondary school children in public and non-public schools within the area served by the Newark School District.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To enhance instruction by giving children experiences with flora and fauna in a natural setting where the children can explore natural phenomena for themselves, but in a structured situation.
   b. To incorporate the acquisition of knowledge of the historical background of the center and its immediate surroundings as well as the scientific truths of the area.
   c. To further an interest in conservation education through direct observation of the desired effects of recommended practices as compared with wasteful conditions that might result from poor control of natural forces.
   d. To have access to a site where the ecology of natural communities can be preserved and studies.
   e. To keep acreage in and around urban areas for showing representative samples of the native landscape.
   f. To develop in all that use the facility an awareness and appreciation of nature along with a respect for living things.
   g. To help promote a more active type of recreation through an on-the-site nature study with the hope that those who visit the center will make their leisure time more productive.
   h. To provide a common ground where both public and non-public schools can work together toward the complete education of children who in many cases receive training from both organizations.

2. New instructional materials being produced: Yes. Grades K-5.

H. MATERIALS PRODUCED:
   1. K-6: Curriculum Guide K-5.
   2. 7-12: Not answered.
   3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
   Curriculum Guide K-5 - $1.50.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: Tape-slide presentation.
   2. Development of other materials anticipated: Auto-tutorial units.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 14.
   2. Number of teachers having adopted all of the project materials: 280.
   3. Number of teachers using some of the project materials: Not answered.
   4. Total number of students using project materials: 8,000.
   5. Totals stated are estimated.
   6. Names and locations of schools where the course is being taught:
      a. R. Elisabeth Maclary School, St. Regis Drive, Newark, De.
      b. Joseph M. McVey School, Old Chestnut Hill Road, Newark, De.
      c. John R. Downes School, Casho Mill Road, Newark, De.
      d. Etta A. Wilson School, Forge Road, Newark, De.

M. TEACHER PREPARATION:
   1. Consultative service available for teachers using the materials: Yes.
   2. In-service education program for teachers using the materials: No.
   3. Pre-service training program for teachers desiring to use the materials: No.
   4. Kinds of teacher preparation programs available: None.
   5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
   6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
   1. Has the effectiveness of the materials been evaluated: Yes. The project has been evaluated by teachers who use the facility.
   2. Pertinent published research studies: The evaluation is a part of the annual report.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
   Students from grades 1-5 are bussed to one of three sites for an experience in outdoor education. (1) Rittenhouse Park, a city park

with stream, forest and lichen-covered rocks, (2) Maclary Nature Center, a wooded trail on the perimeter of an elementary school site, (3) Iron Hill Museum and Nature Trail, a museum containing displays of rocks and minerals as well as Indian artifacts along with stuffed animals native to the area. Kindergarten children visit their own campus. Prior to each trip an orientation period in the classroom is held. At this time both teachers and students are briefed on the purpose of the visit. Lessons are patterned to supplement classroom experiences in science and related to the time of year of the visit. The sequence of visits is grades 3,1,4,5 and 2 with grade four visiting the Museum during the winter months. Follow-up activities are suggested for each group. While at the site, students participate in prescribed activities.

P. PLANS FOR THE FUTURE:

We hope to make more use of the campus of each school. New school sites have been chosen with a consideration of the suitability of the land for outdoor education. At present we are planning a project for the benefit of students qualified for the Special Education program.

A. PROJECT TITLE: POPULATION ENVIRONMENT CURRICULUM STUDY

B. PROJECT DIRECTORS: Dr. Robert W. Stegner, Dr. Val E. Arnsdorf, University of Delaware, Newark, Delaware 19711. (302)738-2331

C. PROJECT HEADQUARTERS:
1. University of Delaware, Newark, Delaware 19711.
2. Special facilities or activities available for visitor viewing: Curriculum Resource Center.

D. PRINCIPAL STAFF: 4 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Dr. Robert W. Stegner, Dr. Val E. Arnsdorf.
2. Date and place of Initiation: Summer 1968. University of Delaware.
3. Overall project purpose: Teacher education and curriculum development in population-environment studies.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Teacher education and curriculum development in population-environment studies, K-12, multidisciplinary, problem-solving program for infusion.
2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
1. Sourcebook for Population-Environment Studies, Experimental Edition, 1972.
2. Conceptual Scheme for Population-Environment Studies, Experimental Edition, 1972.
3. Bibliography of Popular Books on The Marine Environment and Wetlands Ecology.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE:
1. Sourcebook for Population-Environment Studies, Experimental Edition, 1972 - $3.50.
2. Conceptual Scheme for Population-Environment Studies, Experimental Edition, 1972.- $2.50.
3. Bibliography of Popular Books on The Marine Environment and Wetlands Ecology - $1.00.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: A collection of teaching materials ("lesson plans") for population-environment education.
2. Development of other materials anticipated: From the basic resource book, we will produce discrete, separate courses of study, minicourses, and school-wide, multidisciplinary programs for population-environment education.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: Not answered.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: 50.
4. Total number of students using project materials: 150.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Not applicable.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 1 day.
   b. Summer Institute: Yes. 8 weeks, full time.
   c. Evening classes: Yes.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Sourcebook and Conceptual Scheme. Bibliography - Marine Environment.
6. Commercial availability of materials: Available only from Population Curriculum Study, University of Delaware, Newark, Del.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: In the process - by practicing teachers.
2. Pertinent published research studies: None yet.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Educated about 200 teachers in population-environment studies.
2. Produced: Sourcebook, Conceptual Scheme, Collection of "lesson plans" with inventory, Bibliography of Popular Books on The Marine Environment and Wetlands Ecology.

P. PLANS FOR THE FUTURE:

1. Refinement and expansion of lesson plan collection.
2. Continued education of teachers.
3. Dissemination of materials.

A. PROJECT TITLE: POPULATION - ENVIRONMENTAL CENTER

B. PROJECT DIRECTOR: C. Bryan Bennett, 339 Pine Street, Seaford, Delaware 19973. (302)629-8476

C. PROJECT HEADQUARTERS:
   1. Stein Highway, Seaford, Delaware 19973.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: C. Bryan Bennett, Arthur Ellis.
   2. Date and place of Initiation: October 1971. Seaford School District.
   3. Overall project purpose: This is the initial phase of a comprehensive long-range plan to treat and prevent population-environmental problems in the community of Seaford, Delaware.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      Terminal Objective: Given facilities, instruction and activities in which to become involved, the project participants will demonstrate the acquisition of knowledge, skills, attitudes and behavior by publicly acting out and publicly acting on solutions to population-environmental problems.
   2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: Films and slides (35mm) to introduce ecologically important communitites in the Seaford area (100 miles).
   2. Development of other materials anticipated: Develop pilot curriculum materials concerning population-environmental situations.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: None.
   2. Number of teachers having adopted all of the project materials: None.
   3. Number of teachers using some of the project materials: 150.
   4. Total number of students using project materials: 3,100.
   5. Totals stated are definite.

6. Names and locations of schools where the course is being taught:
   - a. Seaford Central Elementary School, Delaware Place, Seaford, Delaware 19973.
   - b. Fred Douglass Intermediate School, Swain Lane, Seaford, Delaware 19973.
   - c. Seaford Central Junior High School, Stein Highway, Seaford, Delaware 19973.
   - d. Seaford Senior High School, N. Market Street, Seaford, Delaware 19973.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   - a. Workshop: Yes.
   - b. Summer Institute: Yes.
   - c. Evening classes: Yes.
   - d. Others: In class assistance, guided field trips and lecture series.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: Unknown.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

I have applied for funding for my project through the Environmental Education Act. As of now, no word has been received concerning these funds. I have filled in this questionnaire as if funds had just been received.

P. PLANS FOR THE FUTURE:

1. Consult students engaged in experiments, research and projects.
2. Conduct programs, field trips, etc. for community adult groups.
3. A series of adult evening courses.
4. Training student to assist with center activities.

A. PROJECT TITLE: POPULATION ENVIRONMENT PROJECT

B. PROJECT DIRECTOR: Thomas S. Hounsell, 205 Wordsworth Drive, Wilmington, Delaware 19808. (302)999-0384

C. PROJECT HEADQUARTERS:
1. 4031 Kennett Pike, Greenville, Delaware 19807.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Total district staff involvement (100 persons).

E. PROJECT HISTORY:
1. Principal originator: Thomas S. Hounsell.
2. Date and place of Initiation: September 1969. 7th grade life science at the Alexis I. duPont Middle School.
3. Overall project purpose: Our entire program is based on the invidivual in an effort to present his relationship, role, interaction and alternatives in a complex technological society. Through this approach we hope to change the focus of responsibility to the individual rather than mankind in general.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. Infusing Population-Environment concepts into our District curriculum.
    b. Modifying the emphasis in the curriculum to encourage individual responsibility.
    c. Utilizing the immediately surrounding school property for multidisciplinary environmental study, coordinated with the total school program.
    d. Developing youth camps away from the school property designed for the multidisciplinary study of the individual and his interrelationships with himself, mankind, and his environment.
    e. Utilizing our community resources to exemplify population-environment problems as they affect us.
    f. Developing models in population-environment education for implementation and dissemination both locally and nationally.
    g. Cooperating fully with any school district or agency that expresses interest in our project.
2. New instructional materials being produced: Yes. Present use K-4, intended use K-12.

H. MATERIALS PRODUCED:
1. K-4: Multidisciplinary approach to man and his environment as related to Math, Science and Social Studies.
2. K-7: Conceptual Guide to the Planetarium Program in the Alexis I. duPont School District.
3. K-12: Life Diary (Pupils record of life in a changing community).
4. 7th grade: Multidisciplinary study of Cape Henlopew and Lewes, Delaware.

5. 7th grade: Full year course Man and His Environment.
6. Grades 10,11,12: Ecology, Environmental Measurement, Man and His Environment. (Elective Social Studies Department).

I. MATERIALS AVAILABLE FREE:
Within one year we should be in a position to make some of the above materials available at a minimal cost, if any.

J. MATERIALS PURCHASABLE:
See item I above.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: A tape program for the non-reader is under development for the K-4 program.
2. Development of other materials anticipated: A family life and human development section may be added to the K-12 program.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 6.
2. Number of teachers having adopted all of the project materials: 40%.
3. Number of teachers using some of the project materials: 25%.
4. Total number of students using project materials: 2,500.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: All of the schools of this district are involved.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1-4 days during academic year.
    b. Summer Institute: Yes. 3 weeks.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Materials are listed in section H.1 and H.2.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Will be evaluated during summer 1972.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
During the past two years I have been involved with the writing of a K-12 multidisciplinary curriculum in population environment studies. This year I am working directly with the staff of the

Alexis I. duPont School District. My efforts are concentrated primarily in the area of teacher education and the infusion of population environment curriculum materials and concepts into the existing school program. Through in-service work with teachers we have been able to design an activity oriented, controlled access system in the area of man and his environment as related to math, science and social studies. This system will be used in the elementary schools with possible extension through the 5th and 6th grades. I am also working with the upper level district faculty in an effort to educate the entire staff to the need for the integration of population environment related concepts into the existing structure. At the present time we have two courses concerning man and his environment, one in the middle school and one in the high school. In addition we are about to begin a course in environmental analysis also at the middle and high school levels. Our program is still in its infancy and it is undergoing constant change.

P. PLANS FOR THE FUTURE:

The completion of a K-12 multidisciplinary approach to Population Environment studies.

A. PROJECT TITLE: ENVIRONMENTAL OUTDOOR LABORATORY SCHOOL

B. PROJECT DIRECTOR: Mrs. Lucille Howerton, Presidential Building, 415 12th Street, N.W., Washington, D.C. 20004.

C. PROJECT HEADQUARTERS:
1. Science Department, Presidential Building, 415 12th Street, N.W., Washington, D.C. 20004.
2. Special facilities or activities available for visitor viewing: Only when camp is open.

D. PRINCIPAL STAFF: 15-20 persons depending upon the number of students at the school. They are employed only when the camp is open.

E. PROJECT HISTORY:
1. Principal originator: Mrs. Marguerite C. Selden, Assistant Superintendent, Department of Summer Schools, Continuing Education and Urban Service Corps.
2. Date and place of Initiation: June 1970. Camp Round Meadow, Catoctin Mountain National Parks, Thurmont, Maryland.
3. Overall project purpose: To establish a school out-of-doors to be used as a laboratory to help pupils gain insights into man's relationship to his natural and man-made environment.

F. PRESENT COMMERCIAL AFFILATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To use the out-of-doors as a laboratory to enrich and enhance the educational experiences of pupils through the use of resourses available only in a natural setting.
2. To extend the awareness of urban youth beyond the city environment into the natural environment through first hand experiences.

H. MATERIALS PRODUCED:
1. K-6: Preliminary guides for teachers to be used at the 5th grade level.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 65 classes have used the materials.
3. Number of teachers using some of the project materials: 65.
4. Total number of students using project materials: Not answered.
5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught: Not answered.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: On-site orientation (3 days).
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Slides to use with teachers and students, instructional guides for teacher use.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: Preliminary evaluation of entire project by Department of Research in the D.C. Public Schools.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

During the school year 1971-72, the school was open for a two week fall session and a six week spring session. 75 pupils attended each week. These were 7th grade pupils selected from twelve junior high schools in the city.

P. PLANS FOR THE FUTURE: Status of project depends upon available funding.

A. PROJECT TITLE: CRITICAL SEEDING AND STABILIZATION

B. PROJECT DIRECTOR: Mrs. Irene Morris, 4918-43rd Street, N.W., Washington, D.C. 20016. (202)363-1743

C. PROJECT HEADQUARTERS:
1. 10th and Monroe Streets, N.E., Washington, D.C. 20017.
2. Special facilities or activities available for visitor viewing: Yes. School grounds.

D. PRINCIPAL STAFF: Not answered.

E. PROJECT HISTORY:
1. Principal originator: Mrs. Irene Morris.
2. Date and place of Initiation: October 1, 1971.
3. Overall project purpose: Conservation education - then environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: The why of conservation.
    a. Environment.
    b. Pollution.
    c. What are bulbs?
    d. What are seeds?
    e. Why is soil important to us?
    f. Why is it important to care for our soil, water, and green plants?

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Slides.
2. Development of other materials anticipated: Filmstrip.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 3.
3. Number of teachers using some of the project materials: 7.
4. Total number of students using project materials: 18.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: Brookland Elementary School, 10th and Monroe Streets, N.E., Washington, D.C. 20017.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Not answered.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes. Time varies.
    - b. Summer Institute: No.
    - c. Evening classes: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not answered.
6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By Mr. Ernest L. Moody, District Conservationist for D.C.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Planting trees - Japanese cherry trees, tulips, daffodils, and studying pH, organisms, pine trees, autumn olive, soil, water, and spruce trees.

P. PLANS FOR THE FUTURE:

Re-seeding, fertilizer, more trash cans around school grounds, memorial rose (if we can get them for our school grounds).

A. PROJECT TITLE: BROAD SPECTRUM ENVIRONMENTAL EDUCATION PROGRAM

B. PROJECT DIRECTOR: Dr. Clair W. Bemiss, 705 Avocado Avenue, Cocoa, Florida 32922. (305)636-6543

C. PROJECT HEADQUARTERS:
1. 705 Avocado Avenue, Cocoa, Florida 32922.
2. Special facilities or activities available for visitor viewing: Yes. Center for Environmental Education and Research Library.

D. PRINCIPAL STAFF: 5 persons regularly employed, 1 part time.

E. PROJECT HISTORY:
1. Principal originators: Brevard County Board of Education.
2. Date and place of Initiation: July 1971.
3. Overall project purpose: To provide environmental education materials and a full course in ecology for 19 junior and senior high schools in Brevard County.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Not answered.
2. New instructional materials being produced: Yes. Grades 7-12.

H. MATERIALS PRODUCED:
1. K-6: Supplementary Resource Guide in Environmental Education for Elementary Teachers.
2. 7-12:
   a. Teachers Curriculum Guide in Field Ecology.
   b. Economic/Moral Aspects of Environmental Education.
   c. Political/Legal Analysis of the Environment.
   d. Community Resources Usage for Environmental Improvement.
   e. Social Aspects of the Environment.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: Any of the materials listed in grades 7-12 are available at costs ranging from $1.65 to $2.25 per copy.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 19.
2. Number of teachers having adopted all of the project materials: 24.
3. Number of teachers using some of the project materials: 168.
4. Total number of students using project materials: 2,486.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
   a. Jackson Junior High School, Titusville, Florida.
   b. Melbourne High School, Melbourne, Florida.

c. Hoover Junior High School, Indialantic, Florida.
d. Central Junior High School, Melbourne, Florida.
e. Cocoa High School, Cocoa, Florida.
f. Delaura Junior High School, Satellite Beach, Florida.
g. Eau Gallie High School, Melbourne, Florida.
h. Edgewood Junior High School, Melbourne, Florida.
i. Johnson Junior High School, Melbourne, Florida.
j. Kennedy Junior High School, Cocoa, Florida.
k. Madison Junior High School, Titusville, Florida.
l. Merritt Island High School, Merritt Island, Florida.
m. Parkway Junior High School, Titusville, Florida.
n. Rockledge High School, Rockledge, Florida.
o. Roosevelt Junior High School, Cocoa Beach, Florida.
p. Southwest Junior High School, Melbourne, Florida.
q. Satellite High School, Satellite Beach, Florida.
r. Titusville High School, Titusville, Florida.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. Twice a year - full day - to introduce materials.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: In-service meetings, every 3 weeks, to discuss progress, problems or have field trips. Usually of three hour duration.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: Not applicable.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Special task force teams consisting of teachers not involved in the project have evaluated the materials.
2. Pertinent published research studies: Still in draft form.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

First year of project - July 1971 to June 1972. At present we have nearly 2500 ecology students, enrolled in 68 classes, in 19 junior and senior high schools being taught by 24 full time teachers. This is the first full-time course in Ecology offered in any school in the State of Florida.

P. PLANS FOR THE FUTURE:

1. Continued development of resource units in a multi-disciplinary approach for secondary schools.
2. Development of an equivalent "in-depth" program for elementary grades K-6.
3. Eventually, development of adult education materials, using a "process-learning" approach.

A. PROJECT TITLE: MARINE SCIENCE STATION

B. PROJECT DIRECTOR: Patrick J. Purcell, P.O. Box 1258, Crystal River, Florida 32629. (904)795-4393

C. PROJECT HEADQUARTERS:
   1. Highway 44 West, Crystal River, Florida 32629.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 10 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originator: Bill Hilliard.
   2. Date and place of Initiation: March 1967.
   3. Overall project purpose: To add to and enrich the educational and cultural opportunities of the area, through an emphasis on natural environments, the marine environment in particular.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To promote an understanding of the importance of existing natural environments, including the seas and estuaries.
      b. To introduce everyone to the marine environment and to stimulate interest in the environmental sciences.
   2. New instructional materials being produced: Yes.

H. MATERIALS PRODUCED:
   1. K-6: Handbook for Elementary Teachers.
   2. 7-12: Handbook for Secondary Teachers.
   3. Others: Student Field Guides.

I. MATERIALS AVAILABLE FREE:
   1. Abstract "They Go Down To The Sea . . . To Study".
   2. Handbook for teachers.
   3. Fauna list of vertebrates.

J. MATERIALS PURCHASABLE: Field Guides.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 45+.
   2. Number of teachers having adopted all of the project materials. 300+.
   3. Number of teachers using some of the project materials: 300+.
   4. Total number of students using project materials: 10,000 /yr.
   5. Totals stated are estimated.
   6. Names and locations of schools where the course is being taught:
      a. Forest High School, Ocala, Florida.

b. Mt. Dora High School, Mt. Dora, Florida.
c. Invernes Middle School, Invernes, Florida.
d. Crystal River Primary School, Crystal River, Florida.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 1 week.
   b. Summer Institute: Yes. 1 week.
   c. Evening classes: No.
   d. Others: All workshops are Audubon sponsored.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: Yes.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By the State Department of Education.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. During the year groups from kindergarten through the university and various adult groups visit the Marine Science Station for one-day field trips.

2. The basic program during the academic school year consists of conservation camp visits by intermediate pupils. An intermediate class, with the home teacher, spends a full week at the station, studying aquatic, estuarine and marine environments.

P. PLANS FOR THE FUTURE:

Continuation of program.

A. PROJECT TITLE: INTERDISCIPLINARY ENVIRONMENTAL EDUCATION K-12 (IEE PROJECT)

B. PROJECT DIRECTOR: John Arena, 3600 S.W. College Avenue, Fort Lauderdale, Florida 33314. (305)587-0600

C. PROJECT HEADQUARTERS:
1. 3600 S.W. College Avenue, Fort Lauderdale, Florida 33314.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 5 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originator: John Arena.
2. Date and place of Initiation: July 1, 1971 - Nova Complex.
3. Overall project purpose: Develop an IEE program K-12 for environmental studies which can be integrated into the existing curriculum.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To plan for the development of curriculum materials relevant to the environment for all subject areas and grades K through 12.
2. New instructional materials being produced: Yes. Grades 7-12.

H. MATERIALS PRODUCED: None as yet.

I. MATERIALS AVAILABLE FREE:
"Sources of Reference Material and Audio-Visual Aids for Environmental Education", February 1972. Available from Mr. Leo Howell, State Coordinator, Title III, ESEA, Department of Education, 219 West Jefferson Street, Tallahassee, Florida 32304.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: "Guidelines for Curriculum Development - Environmental Education K-12".
2. Development of other materials anticipated: Teacher inservice materials.

L. PROJECT IMPLEMENTATION: This is a planning grant.

M. TEACHER PREPARATION: This is a planning grant.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Just started planning grant this year.

P. PLANS FOR THE FUTURE:

Indoor and outdoor laboratory activities relating to the environment.

A. PROJECT TITLE: MODEL STRATEGY FOR AN EFFECTIVE ENVIRONMENTAL EDUCATION PROGRAM

B. PROJECT DIRECTOR: William Hammond, Coordinator of Science and Environmental Education, 5456 Parker Drive, Fort Myers, Florida 33901. (813)481-4676

C. PROJECT HEADQUARTERS:
1. Environmental Education Center, 2266 Second Street, Fort Myers, Florida 33901.
2. Special facilities or activities available for visitor viewing: Yes. Office-Library-Resource Center and community teaching sites.

D. PRINCIPAL STAFF: 9 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: William Hammond, Lee County Schools.
2. Date and place of Initiation: Summer program - 1965.
3. Overall project purpose: Implement an environmental education program K-adult, which involves participants in effecting community change, allows widespread field experiences through innovative techniques that can be replicated by other school systems etc. nationwide.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E-3.
2. New instructional materials being produced: Yes. K-adult.

H. MATERIALS PRODUCED:
1. K-6:
   a. Interdisciplinary teacher scope and sequence with grade level activity guides (one per grade level).
   b. Field activity experience appropriate to each grade level.
2. 7-12:
   a. Interdisciplinary teacher scope and sequence with grade level activity guides.
   b. Field activity modules.
   c. Middle school teaching units.
   d. 9th grade (4 week) interdisciplinary unit "Values in Conflict".
   e. Several programmed texts - middle school.
3. Others:
   a. Interdisciplinary Resource Guide.
   b. Field activities planning guide.
   c. Newsletter.
   d. Catalogue of A.V. materials.

I. MATERIALS AVAILABLE FREE:
Single copies of any of the above.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
    a. Film-cassette sets - mangroves, sea turtle, water supply.
    b. Simulation activities - Big Cypress Swamp.
  2. Development of other materials anticipated:
    a. More extensive field program texts.
    b. More extensive grade level activities.
    c. Community information program publications.

L. PROJECT IMPLEMENTATION: On pilot basis.
  1. Number of schools now using entire set of materials: 12.
  2. Number of teachers having adopted all of the project materials: 300.
  3. Number of teachers using some of the project materials: 650.
  4. Total number of students using project materials: 3,000.
  5. Totals stated are estimated.
  6. Names and locations of schools where the course is being taught: On pilot basis (no course).
    a. Edison Park Elementary School, 2480 Euclid Avenue, Fort Myers, Florida 33901.
    b. Cypress Lake Middle School, Cypress Lake Drive, Fort Myers, Florida 33901.
    c. Fort Myers Middle School, Central and Moreno, Fort Myers, Florida 33901.
    d. St. Francis Xaviar, Heitman Street, Fort Myers, Florida 33901.

M. TEACHER PREPARATION:
  1. Consultative service available for teachers using the materials: No. Special arrangements could be made.
  2. In-service education program for teachers using the materials: Yes.
  3. Pre-service training program for teachers desiring to use the materials: No.
  4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. A wide variety of length and format ranging from faculty grade level 1½ hour meetings to semester courses.
    b. Summer Institute: No.
    c. Evening classes: Yes. 3 hours per week for one semester.
    d. Others:
      1) Faculty grade level workshop - 3 hours.
      2) County-wide disciplinary in-service days - 4 hours.
  5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Many of the project materials described are being used at Florida State University and University of Southern Florida in pre-service courses.
  6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Project staff and evaluator.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1969-1971: County sponsored environmental workshops for science teachers, mobile field lab in school bus, community action project by students, field program reaching approximately 5,000 students.

1971-1972: Development of programmed field tests and programs for 10,000 students, development of scope and sequence and grade level activity guides, K-9 interdisciplinary activity guides, numerous curriculum materials, units, etc., community education for 10,000+ people, and 9th grade interdisciplinary.

P. PLANS FOR THE FUTURE:

1. County-wide implementation of curriculum and field programs involving 24,000 students and 1,000 teachers and administrators.

2. Expansion of innovative field program.

3. Implementation of community involvement components.

A. PROJECT TITLE: MARINE SCIENCE EDUCATION CENTER

B. PROJECT DIRECTOR: George E. Mann, 1347 Palmer Street, Mayport, Florida 32233. (904)246-2733

C. PROJECT HEADQUARTERS:
   1. 1347 Palmer Street, Mayport, Florida 32233.
   2. Special facilities or activities available for visitor view-viewing: Yes. Museum, Library, Wet Lab (containing aquaria with live specimens).

D. PRINCIPAL STAFF: 12 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: John Beakley, Jack Barile.
   2. Date and place of Initiation: June 1, 1968.
   3. Overall project purpose: The Marine Science Education Center is a center designed to enrich the science program of the students in Duval County by giving the elementary and secondary students of the county experience in the marine science field at a place appropriate for such experience.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: See E-3.
   2. New instructional materials being produced: Yes. Grades 1-12.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Curriculum guides for grades 1-6.
      b. Evaluative tests.
      c. Specimen kits.
      d. Set of transparencies.
   2. 7-12:
      a. Curriculum guides for grades 7-12.
      b. Evaluative tests.
      c. Specimen kits.
      d. Set of transparencies.
   3. Others:
      a. 16mm films showing marshes and collection devices.
      b. Film loops.
      c. Audio tapes.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
   1. Curriculum Guides.
      a. Unit I - Grades 1-5....$1.00.
      b. Unit II - Grade 6 .....$1.00.
      c. Unit III - 7th Grade Marine Biology Guide ......$1.00.
      d. Unit IV - 8th Grade Chemistry...................$1.00.
      e. Unit V - 9th Grade Physical Science ....$1.00.

f. Unit VI - 10th Grade Marine Biology............$1.00.
g. Unit VII - 11th Grade Chemistry..................$1.00.

2. Preserved marine specimen kits with 20 specimens (Available to Duval County Schools only)................$5.00.
The above materials are available from the Center.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: They are available to all schools in Duval County, approximately 200.
2. Number of teachers having adopted all of the project materials: 500.
3. Number of teachers using some of the project materials: 1,000.
4. Total number of students using project materials: 25,000 elementary; 5,000 secondary.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. William Raines Senior High School, Duval County School School System.
    b. Fletcher Senior High School, Duval County School System.
    c. Terry Parker Senior High School, Duval County School System.
    d. Southside Junior High School, Duval County School System.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 day.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: In-service training in the classroom with the teacher. Program is presented to the teacher along with the two week curriculum for her to present to the class.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
    a. Curriculum guide.
    b. Marine specimen kit.
    c. Set of transparencies for overhead projector.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By Marilynn Heaney, Project Evaluator, 1347 Palmer Street, Mayport, Florida 32233.

2. Pertinent published research studies: Quarterly and year end reports to Coordinator of Elementary and Secondary Education Act Title III, Office of Federal-State Relations, State Department of Education, Tallahassee, Florida.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
We collect and supply Duval County Schools with marine specimens.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION IN THE DADE COUNTY PUBLIC SCHOOLS

B. PROJECT DIRECTOR: Harriet Ehrhard, 1410 N. E. Second Avenue, Miami, Florida 33132. (305)350-3506

C. PROJECT HEADQUARTERS:
   1. 1410 N. E. Second Avenue, Miami, Florida 33132.
   2. Special facilities or activities available for visitor viewing: Yes. Environmental Education Center at Crandon Park.

D. PRINCIPAL STAFF: 3 persons employed in the Environmental Education Center, 10 persons employed in the Everglades National Park, and teachers in 233 schools.

E. PROJECT HISTORY:
   1. Principal originators: Interested science teachers and supportive administrative and community personnel.
   2. Date and place of Initiation: Environmental Education has been a part of the Dade County Schools program for many years. Major dates: In-service 1964; South Florida Environmental Media Series 1968; Environmental Education Center 1969; Everglades National Park Program 1969; Urban Environmental Center 1972.
   3. Overall project purpose: The overall purpose of Environ-Education is to give students and adults a basic understanding of our environment in order for them to realize the necessity of taking appropriate action to maintain a habitable world.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: See E-3 above. Each part of the total program has explicit objectives related to its specific phase of the program.
   2. New instructional materials being produced: Yes. Media lessons for the elementary children, K-6, are being produced.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Ecology in the Elementary School - Social Studies, Science, Math, Art - Curriculum Bulletin 8B-1.
      b. 40 media lessons on South Florida Environmental Science.
      c. Teacher and student materials for Environmental Education Center.
   2. 7-12:
      a. 52 media lessons and guide of the biological aspects of South Florida Environmental Science.
      b. 45 media lessons and guide on the physical and chemical aspects of South Florida Environmental Science.
      c. 22 Quinmester Courses related to environmental problems.
      d. Ten Years to Go - (Social Studies Curriculum Bulletin).
      e. Natural History and Ecology of South Florida - Curriculum Bulletin 8B - 2.
   3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:

1. Ecology in the Elementary School Curriculum Bulletin 8B-1 $2.50.
2. South Florida Environmental Science Media Units Guide Curriculum Bulletin 8B2-MU-1-11 $1.00.
3. South Florida Environmental Science Media Units Guide Curriculum Bulletin 8B2-MU-12-21 vol. II $1.00.

Available from Textbook Services, 2210 S.W. Third Street, Miami, Florida.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: 40 elementary environmental media lessons are being developed - each has a film strip and audio tape with pre and post activities, rationale, and references. The individual media units, including the films, filmstrips, audiotapes, and videotapes, as well as the printed materials will be available for purchase in the near future. Dade County Science Quinmester Courses related to ecology and the environment are available through ERIC.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

The materials are available to all public schools in Dade County. Schools where the course is being taught:

1. Southwest Miami Senior High School, 8855 S.W. 50 Terrace, Miami, Florida.
2. Highland Oaks Elementary School, 20500 N.E. 24 Avenue, North Miami Beach, Florida.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes. On a very limited basis.
2. In-service education program for teachers using the materials: Yes. Limited.
3. Pre-service training program for teachers desiring to use the materials: Yes. Limited.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 2-6 hours.
   b. Summer Institute: Yes. 6 days.
   c. Evening classes: Yes. 15-30 hours.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No. We have materials for use within Dade County, but not in quantities for widespread distribution.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. An evaluator in the Dade County Public Schools Media Department has validated random samples of the media productions.

2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
   1. Publication of curriculum bulletins.
   2. Production of instructional materials.
   3. Course and program development.
   4. Teacher training activities.

P. PLANS FOR THE FUTURE:

We have received a $43,000 grant from the Environmental Education Act to establish an Urban Environmental Center. This will be located in a heavily populated area where many and various kinds of environmental problems exist. Students from schools throughout the county will be transported to the center. They will visit areas with specific problems and return to the Center to analyze the causes, then continue to search for solutions after returning to their respective schools.

A. PROJECT TITLE: ENVIRONMENTAL SENSITIVITY PROJECT

B. PROJECT DIRECTOR: Roy L. Hyatt, P.O. Box 205, Gonzalez, Florida 32560. (904)968-2230

C. PROJECT HEADQUARTERS:
  1. 2501 N. Hayne Street, Pensacola, Florida 32503.
  2. Special facilities or activities available for visitor viewing: New exhibit.

D. PRINCIPAL STAFF: 6 persons regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: Roy L. Hyatt, Dr. Hiram Smith, Veronica Fish.
  2. Date and place of Initiation: Introduced in January 1970. Funded in August 1970.
  3. Overall project purpose: To make ecology a vital and effective part of the elementary school curriculum in Escambia and Santa Rosa Counties.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To achieve an increased emphasis upon ecology in elementary school curricula and to promote an appreciation of ecology in children's homes, especially through increased teacher understanding and use of field trips.
    b. To bring student, teacher, school and home awareness of ecology and environmental trends to bear upon the increasing ecological threats to human survival and the general well-being of man and other life.
    c. To establish a nature center designed for teaching elementary school children ecology; included in the Center would be an ecological museum, field-trip areas, and a library of resources and materials for environmental education at the elementary school level.
  2. New instructional materials being produced: Yes. Elementary grades.

H. MATERIALS PRODUCED:
  1. K-6: None.
  2. 7-12: None.
  3. Others: Leaflets describing the proper setting up and maintenance in the classroom of miniature habitats paralleling those in local environments. Leaflets describing the proper care and maintenance of classroom animals.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: None.
2. Development of other materials anticipated:
    a. Walk Booklets.
    b. Instructional Units.
    c. Slide sets on pollution.
    d. Slide set on nature.

    Materials to support Environmental Education In-service Programs.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 50.
2. Number of teachers having adopted all of the project materials: 50.
3. Number of teachers using some of the project materials: 150.
4. Total number of students using project materials: 4,000 since 1970.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
    a. Jay Elementary School, P.O. Box 127, Jay, Florida 32565.
    b. Beulah Elementary School, Route 8, Box 829, Pensacola, Florida 32506.
    c. Episcopal Day School, 317 N. Palafox Street, Pensacola, Florida.
    d. Edgewater Elementary School, 100 Boeing Street, Pensacola, Florida 32507.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 2 hour.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Continuation of original planning grant.
2. Pilot Activities.
3. Writing of proposal for operational grant funding on August 15, 1972.
4. Obtaining site for location of Center.
5. Hiring of staff.
6. Implementing of proposal.
7. Field trip in-service training for 2nd and 5th grade teachers.

8. Setting up of library of resources for the teaching of ecology and environmental problems.
9. Construction and establishment of an ecological museum.

P. PLANS FOR THE FUTURE:

By August, 1973, opening center to teachers in grades K-12 with resource library, ecological museum and consultive service in planning environmental field trips and in the teaching of ecology in all grades.

A. PROJECT TITLE: TAYLOR COUNTY RESOURCE-USE OUTDOOR EDUCATION CENTER

B. PROJECT DIRECTOR: James M. Phillips, RFD 1, Box 326, Perry, Florida 32347. (904)584-6383

C. PROJECT HEADQUARTERS:
  1. RFD 1, Box 326, Perry, Florida 32347.
  2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 7 persons regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: Community leaders and educators.
  2. Date and place of Initiation: July 1, 1967 at Perry, Florida.
  3. Overall project purpose: To demonstrate innovative and exemplary ideas and practices in outdoor education and resource-use education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Enhance the learning experience of the participating students by increasing their understanding and appreciation of natural resources.
    b. Serve as a vehicle for in-service teacher training in environmental education.
    c. Extend and supplement the classroom experience.
    d. Best instructional practices/learning materials will be used to provide effective learning in environmental/outdoor education.
    e. Physical facilities and natural environment will be obtained in natural diversity to furnish a practical and real learning laboratory.
  2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
  1. K-6:
    a. Teachers Guide.
    b. Expand Your Classroom.
    c. Audio-Visual Guide.
    d. Pre/Post Test - Birds, Ecology, Marine Study.
  2. 7-12:
    a. Teachers Guide.
    b. Expand Your Classroom.
    c. Audio-Visual Guide.
    d. Pre/Post Test - Ecology, Marine Study.
  3. Others:
    a. Self-Guided Trail Guide (two).
    b. Teacher Workshop Procedings (1971).
    c. Slide Sets: Ecology, Day at the Outdoor Center, Florida Scenes.

I. MATERIALS AVAILABLE FREE: Any of the materials listed are free.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Environmental Studies Guide.
2. Development of other materials anticipated: Teacher workshop procedings.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 15.
2. Number of teachers having adopted all of the project materials: 150.
3. Number of teachers using some of the project materials: 50.
4. Total number of students using project materials: 6,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Gladys Morse Elementary School, Perry, Florida 32347.
    b. Pinetta Junior High School, Pinetta, Florida.
    c. Old Town School, Old Town, Florida.
    d. Howard Middle School, Monticello, Florida.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 3 weeks.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Pre-school workshop. 1-2 days.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes.
Santa L. Hokanson, Project Evaluator 1970-71.
Kathyrn Foland, Project Evaluator 1971-72.
2. Pertinent published research studies: None.
3. Unpublished research: End of Budget Period Report 1970-71.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. 1969-70: Completion of project development on 120 acre site.
2. 1970-71:
    a. 15 schools from 6 counties utilized the project facilities- approximately 7,000 students.
    b. Three week teacher workshop.
    c. Nine week summer day camp.

3. 1971-72:
    a. 15 schools from 6 counties utilized the project facilities-approximately 15,000 students.
    b. Three week teacher workshops.
    c. Completed interpetative center and farm/forest homestead study area.

P. PLANS FOR THE FUTURE:
This program was concluded on June 30, 1972.

A. PROJECT TITLE: NATURE'S CLASSROOM - OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Henry Verges, Principal, Nature's Classroom, Route I, Box 396, Thonotosassa, Florida 33592. (813)986-2089

C. PROJECT HEADQUARTERS:
1. Verges Road, Thonotosassa, Florida 33592.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 Principal, 7 Teachers, 1 Teacher Aide, 5 Bus driver-teacher aides, 1 Parks Manager, 1 Custodian, 1 Secretary. All are regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Mr. Frank Farmer, Assistant Superintendent for Administration of Hillsborough County, and Henry Verges, Principal of Nature's Classroom, with the aid and assistance of the Southwest Florida Water Management District, the Hillsborough County School System, The Model Cities Program, E.S.E.A. and the Migrant Program.
2. Date and place of Initiation: September 1967.
3. Overall project purpose:
   a. The teaching of ecology, science, applied mathematics, the study of survival, lifetime recreational skills, such as riflery, archery, water safety, etc.
   b. To teach our future citizens to use the wilderness areas without abusing them.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Ecology.
   b. Conservation.
   c. Science.
   d. Survival.
   e. Compass.
   f. Boating and Water Safety.
   g. Study of native wildlife and plant life.
2. New instructional materials being produced: No. We follow no set teaching manuals. We deal with 6th grade children, Headstart children, Follow-through children, Migrant children.

H. MATERIALS PRODUCED:
We use no text books as such. Our classrooms are 365 acres of wilderness on the Hillsborough River. Our books are used by our teachers, principally for reference and furthering their own knowledge.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: We use slide presentations with verbal explanations of each slide, used on a manually operated "carousel-type" slide projector.

2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: All of the schools in Hillsborough County that have 6th graders.

2. Number of teachers having adopted all of the project materials: Not applicable.

3. Number of teachers using some of the project materials: Not applicable.

4. Total number of students using project materials: 11,000.

5. Totals stated are definite.

6. Names and locations of schools where the course is being taught: The school children are brought to the center.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 3 days.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. The children who come to us for teaching, and the Outdoor Education groups in our region and in the nation.

2. Pertinent published research studies: We rarely if ever document our work. It is done directly with the children, always searching for the "teachable moment".

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. We have added two portable dormitories and one portable kitchen, so the inner-city children may experience an overnight stay at Nature's Classroom.

2. We have, with the assistance of the Audubon Society, built a catwalk across a section of the swamp where the children may study the changes that occur during wet and dry seasons without disturbing or destroying any of the life going on there.

P. PLANS FOR THE FUTURE:

We plan to build a Seminole Indian Chickee, for the study of the life-style of the Florida Seminole Indians who live in the Everglades National Park in Florida.

A. PROJECT TITLE: PINE JOG ENVIRONMENTAL SCIENCES CENTER

B. PROJECT DIRECTOR: Manley L. Boss, PhD., Biology Department, Florida Atlantic University, Boca Raton, Florida 33432.
(305)391-5100 (ext. 2747)

C. PROJECT HEADQUARTERS:
1. 6301 Summit Boulevard, West Palm Beach, Florida 33406.
2. Special facilities or activities available for visitor viewing: Yes. Guided, interpretive trail walks - groups by appointment only.

D. PRINCIPAL STAFF: 5 persons plus director all regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Mr. John H. Storer (concept), Mr. and Mrs. Alfred G. Kay (physical facilities and support).
2. Date and place of Initiation: Spring 1961.
3. Overall project purpose: To provide programs in environmental study for the public and private school children of Palm Beach County. Since inception, programs in teacher education and non-credit evening courses in natural science and conservation have been added. Now preparing curriculum materials and A-V materials to augment the program.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To make elementary school children more responsive to their environment.
   b. To supply information to guide value judgements and aid in decision making in the upper grades.
   c. To collect and disseminate information relative to the environment to the general public.
   d. To facilitate the incorporation of environmental materials into the classroom.
2. New instructional materials being produced: Yes. K-12 as the need arises.

H. MATERIALS PRODUCED:
1. K-6:
   a. Along Pine Jog's Trails with the Children.
   b. Pine Jog Guide to Environmental Study (with test).
   c. Numerous mimeo curriculum guides and suggestions.
2. 7-12:
   a. Environmental Sciences Instructional Program (middle grades) with tests under development.
   b. Marine Environmental Science Program (for upper grades) with tests pilot program underway currently.
3. Others: None.

I. MATERIALS AVAILABLE FREE:

1. The Evolution of an Idea.
2. Along Pine Jog's Trails with the Children.
3. The Language of Ecology.
4. A Dozen Concepts for Environmental Education (from Nature Study).
5. Survival Tips #1 - What Can I Do?
   Survival Tips #2 - How Can We Help?
6. Notes on Recycling Wastes.
7. Leading and Ecology Walk.
8. What's All the Fuss About Pesticides?
9. Exploring the Animal Kingdom By Way of Sight, Sound and Sign.
10. Florida's Water.
11. Swamps and Marshes - Nature's Rain Barrels.
12. The Economic Value of Florida's Estuarine Areas (by John McQuigg).
13. Ecological Successions.
14. The Community Changes.
15. Check lists of Birds, Reptiles and Amphibians, etc.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Series of slide programs with recorded tape narration and printed narration on various subjects relative to the Palm Beach County area. Ready now are programs on "Reptiles of Palm Beach County" and "Snakes of Palm Beach County". Under preparation are "Poisonous and Edible Plants", "Vegetation of the Pine Flatwoods", "Scrub Vegetation", "The Everglades", etc.
2. Development of other materials anticipated: More of the same as listed above plus complete units, lesson plans for conservation education K-12.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: Unknown.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: At least 1,000 in Palm Beach County plus unknown in other counties as we have been distributing materials for years.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.
6. Names and locations of schools where the materials are being used:
   a. Belvedere Elementary School, 3001 Lake Avenue, West Palm Beach, Florida.
   b. Meadow Park Elementary School, 965 Florida-Mango Road, West Palm Beach, Florida.
   c. Kirkland Elementary School, 4200 Purdy Lane, West Palm Beach, Florida.
   d. West Riviera Elementary School, 1057 W. 6th Street, Riviera Beach, Florida.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Under preparation at this time.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. Varies - from 3 hours to 3 weeks.
    b. Summer Institute: Yes. 3 week course with graduate credit.
    c. Evening classes: Yes. Open to general public. Usually 6 sessions - total 10-12 hours.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. We have conducted such training sessions for teachers and school administrators from nearby counties. Materials are usually prepared specifically for the workshop and consist of mimeo handouts plus materials garnered from other sources. We have none in quantity or condition to distribute beyond our own activities.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By teachers attending workshops, and by teachers and principals who have made use of Pine Jog's program.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Presented basic program on natural ecology to 10-12,000 elementary school children annually. Presented the same to 1,000 boy and girl scouts annually.
2. Conducted graduate level credit course in teaching conservation to 50-100 teachers annually.
3. Conducted in-service training workshops for teachers and administrators from 10 county school systems.
4. Conducted average of 5 non-credit evening courses for the general public annually, average attendance of 50.
5. Staff presented average of 100 talks or programs to civic clubs, etc. annually.
6. Served as advisors on local conservation issues, staged seminars, sat on ad hoc committees on environmental matters, edited newsletters on environmental issues, etc.

P. PLANS FOR THE FUTURE:

Now under construction - a three and one-half acre teaching marsh. The total marsh is designed to instruct children in basic ecological and environmental concepts. Animal and plant communities will be managed to present concepts most adequately.

A. PROJECT TITLE: **FERNBANK SCIENCE CENTER**

B. PROJECT DIRECTOR: Dr. Lewis S. Shelton, 156 Heaton Park Drive, N.E., Atlanta, Georgia 30307. (404)378-4311

C. PROJECT HEADQUARTERS:
1. 156 Heaton Park Drive, N.E., Atlanta, Georgia. 30307.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 65 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Jim Cherry, Superintendent, DeKalb County Schools; Dr. Lewis S. Shelton, Director, Fernbank Science Center; Andrew J. Olsen, Assistant Director, Fernbank Science Center.
2. Date and place of Initiation: December 1967.
3. Overall project purpose: To supplement classroom curriculum K through Graduate School with the forefronts of scientific knowledge, teacher education, and the fostering of public scientific literacy.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Same as E-3.
2. New instructional materials being produced: Yes. First through twelfth grade.

H. MATERIALS PRODUCED:
1. K-6:
    a. Common Trees of DeKalb County.
    b. Looking Closely at Trees.
    c. Some Common Arthropods.
    d. Building Terrariums.
    e. Snakes of DeKalb County.
2. 7-12: Same as above.
3. Others: None.

I. MATERIALS AVAILABLE FREE: General brochures and planetarium brochures.

J. MATERIALS PURCHASABLE: A list will be sent on request.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Slides, film strips and video tapes for utilization in Science Center; single visitation programs, courses, and public offerings.
2. Development of other materials anticipated: None for broad distribution.

L. PROJECT IMPLEMENTATION:

Fernbank Science Center's primary services are directed toward the student, teacher, and lay adult community through participation in on-site programs. Annual participation is approximately 400,000.

M. TEACHER PREPARATION:

The Science Center offers a wide variety of in-service programs for primary and secondary school teachers as well as a wide variety of courses which carry graduate credit through neighboring universities. We have no materials for educators to use in preparing teachers.

N. PROJECT EVALUATION: None. We are not material production oriented.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Fernbank's primary areas of service have been consistent since its opening in December 1967. Our basic format directs itself toward the extension of classroom curriculums through programs designed for each grade level which extend the student's knowledge to the forefronts of scientific knowledge in the subject area he is considering. Equal emphasis is placed on enhancement of teacher knowledge of scientific fields with emphasis on areas of recent advancement and those areas which have not received consideration in proportion to national emphasis. Extensive programs for the public are also provided, each designed to foster appreciation through understanding of our natural and physical environment.

P. PLANS FOR THE FUTURE:

We anticipate the addition of a major teaching museum of science and history, an inland marine aquarium, botanical gardens and greenhouse area, each of which will serve to broaden the areas of our educational services.

A. PROJECT TITLE: GEORGIA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF PARKS AND RECREATION

B. PROJECT DIRECTOR: Mr. Henry D. Struble, Parks and Recreation Division, 270 Washington Street SW, Atlanta, Georgia 30334. (404)656-2754

C. PROJECT HEADQUARTERS:
1. 270 Washington Street SW, Atlanta, Georgia 30334.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 254 full-time employees. We also have a seasonal staff.

E. PROJECT HISTORY:
1. Principal originators: State of Georgia Acts of 1937 created the Department of Natural Resources with a Division of State Parks, Historic Sites and Monuments.
2. Date and place of Initiation: 1937, Atlanta, Georgia.
3. Overall purpose: The purpose of the State Parks of Georgia is to serve the people and other visitors by:
   a. Preserving and protecting natural areas of unique or exceptional scenic value for the inspiration and benefit of not only the present generation but also of generations to come.
   b. Establishing and operating state parks that provide recreational use of natural resources and outdoor recreation in natural surroundings.
   c. Portraying and interpreting plant and animal life, geology, and other natural features and processes included in the various state parks.
   d. Preserving, protecting and portraying historic and scientific sites of state wide importance.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E-3.
2. New instructional materials being produced: Yes. All publications for the general public.

H. MATERIALS PRODUCED:
1. General brochures on all parks.
2. Brochures on individual parks.
3. Nature trail guides (self-guiding trails).
4. Occasional miscellaneous publications.

I. MATERIALS AVAILABLE FREE: All published materials are free.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Published materials are continually updated and new materials are being developed for

our new state parks as they are developed.
2. Development of other materials anticipated: New park brochures.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION:
A consultant service is available for teachers using the materials.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By us over the years.
2. Pertinent published research studies: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
We have been establishing, maintaining and operating state parks since 1937.

P. PLANS FOR THE FUTURE:
Establishment of additional parks and implementation of better programs in all parks.

A. PROJECT TITLE: KENNESAW MOUNTAIN ENVIRONMENTAL STUDY AREAS

B. PROJECT DIRECTOR: Raymond J. Geerdes, Box 1167, Marietta, Georgia 30060. (404)427-4686

C. PROJECT HEADQUARTERS:
1. Kennesaw Mountain National Battlefield Park, Marietta, Georgia 30060.
2. Special facilities or activities available for visitor viewing: Yes. 1.5 mile loop trail through a wooded area.

D. PRINCIPAL STAFF: 2 permanent rangers assigned to the park, 2 new rangers assigned temporarily and 1 volunteer on the staff.

E. PROJECT HISTORY:
1. Principal originators: This project is an extension of the National Park Service Environmental Education Program.
2. Date and place of Initiation: The original environmental study area in the park was set up in 1969. USNPS Programs began in 1967.
3. Overall project purpose: The ultimate goal is for the student to develop an awareness of his environment leading to the shaping of an environmental ethic to guide his behavior in dealing with the environment.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
1. Objectives of the project: We are trying to implement the NESA, NEED, and NEEL Programs all of which have the same ultimate goals. The STEP program has been added as an official program.
2. New instructional materials being produced: Yes.

H. MATERIALS PRODUCED:
1. K-6: National Environmental Education Development Materials, (NEED).
    a. Level 3 - Students Classroom Book, Teachers Guide.
    b. Level 4 - Students Classroom Book, Teachers Guide.
    c. Level 5 - Students Classroom Book, Teachers Guide.
    d. Level 6 - Students Classroom Book, Teachers Guide.
2. 7-12: Level 7 and 8 - the same as above.
3. Others:
    a. Levels 4-9 - Picture Packet (with Teachers Manual).
    b. Man and His Environment - an introduction to the use of ESA's (Environmental Study Areas) and related film strip with narration.

I. MATERIALS AVAILABLE FREE:
We do not advertise free materials, but we do make donations of the above materials to schools and teachers. We have several pamphlets advertising the NESA and NEED materials.

J. MATERIALS PURCHASABLE:

1. Man and His Environment. Order from Publications-Sales Section, National Education Association, 1201 Sixteenth Street, N.W., Washington, D.C. 20036. $1.75 per copy.

2. Other materials from Silver Burdett Company, 460 S. Northwest Highway, Park Ridge, Illinois 60068.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: A new publication is being developed - "A Guide for Planning and Conducting Environmental Study Area Workshops" - by NEA, for the NPS. Will sell for $2.25.

2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:

About 35 schools have set up ESA's and have the guides for using an ESA. We have no way of knowing the number of teachers in the schools using the materials or the number of children. We took 5,293 children through the Park ESA in the past year.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 10 hours.
   b. Summer Institute: Yes. 10 hours.
   c. Evening classes: No.
   d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: The Man and His Environment book is probably applicable here.

6. Commercial availability of materials: Yes.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: No. Not by this park. May have been evaluated by the Office of Environmental Education in Washington, D.C.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The project began with the laying out of the Park ESA. This amounted to a 1.5 mile trail (loop) which took in as much variety as the area provided - pine forest, hard-wood forest, stream, opening, etc. We then scheduled school groups, and rangers led the groups on environmental awareness walks. The original trail became eroded, and we have since laid out a new one. In an effort to reach more people, we have set up a 10 hour course for training environmental study area leaders. These leaders conduct walks on acreage set aside by the Girl Scouts for this purpose. We have also set up ESA's at various schools and made the NESA and NEED materials available for their use. The materials are easily adapted to existing curriculum and are designed for use in all disciplines. One of our main concerns is to stimulate schools and to encourage the use of the out-of-doors in teaching.

P. PLANS FOR THE FUTURE:

We have just started a new program for high school students called STEP - Students Towards Environmental Participation. This program has two different actions: one is that each person pledge himself to serve as an ESA leader after attending the 10 hour course. The other is to carry on action programs within each specific school.

A. PROJECT TITLE: NATURAL RESOURCE USE INSTITUTE

B. PROJECT DIRECTOR: Philip Greear PhD., Shorter College, Rome, Georgia 30161. (404)232-2463

C. PROJECT HEADQUARTERS:
1. Shorter College, Rome, Georgia 30161.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 3 part time persons employed.

E. PROJECT HISTORY:
1. Principal originators: Dr. Philip Greear.
2. Date and place of Initiation: 1966 - Shorter College.
3. Overall project purpose: To improve environmental education in schools K-12.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To upgrade teacher understanding of E.Q. problems and improve teaching techniques.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: No materials are produced.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION:
Summer institute only - 3 weeks duration.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Approximately 40 teachers have attended the institute each year.

P. PLANS FOR THE FUTURE:
Expansion of numbers of teachers.

A. PROJECT TITLE: FOUNDATIONAL APPROACHES IN SCIENCE TEACHING - FAST

B. PROJECT DIRECTOR: Dr. Francis M. Pottenger, III., University Lab. School, 1776 University Avenue, Honolulu, Hawaii 96822. (808)944-8563

C. PROJECT HEADQUARTERS:
1. Science Department, University Lab. School, 1776 University Avenue, Honolulu, Hawaii 96822.
2. Special facilities or activities available for visitor viewing: University Laboratory School classes.

D. PRINCIPAL STAFF: 13 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Hawaii Science Curriuculm Council and the Faculty of Research and Development Group of the College of Education - University of Hawaii.
2. Date and place of Initiation: Summer 1967.
3. Overall project purpose: To produce a 3 year sequential and articulated environmental studies curriculum specific to the local ecology of Hawaii.

F. PRESENT COMMERCIAL AFFILATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
Foundational Approaches in Science Teaching (FAST) is designed to be a three-year sequential laboratory and field-centered science program for grades 7-9 which develops an understanding of foundational concepts and methodologies of the physical, earth, and biological sciences and relates these to the issues of man's manipulation and use of his environment. It articulates with science curricula in both the elementary and high school and is intended for use in a foundational education curriculum, thus is appropriate for both terminal and continuing science education. FAST capitalizes on certain positive developmental factors peculiar to the period of early adolescence. Evidence points to the fact that this is a time when students gain the ability to grapple with the abstract, a time when the basic concepts of science can be programmatically introduced for rediscovery, and a time when the students are able to enter into *bona fide* scientific inquiry and reflect on their activities. Throughout the FAST program the student is asked to play a triple role. He operates first as a scientist, laboring at the tasks of inquiry and generalization. Then he steps out of his role to assume the stance of the philosopher reflecting on the nature of scientific inquiry and its place in the larger social context. Finally, he takes the role of a member of society who ponders the impact of scientific and technological change and develops ways of coping with problems. This pause to comtemplate on the kind and quality of knowledge that a science generates gives the student a more nearly complete frame of comprehension into which he can fit the achievements and implications of science that he will know in his lifetime.

2. New instructional materials being produced: Yes. Non-graded use in grades 6-10. Three levels of materials have been developed most commonly used in grades 7,8 and 9.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12:
   a. Level 1-Student Inquiry Problems, Teacher's Guide, Evaluation.
   b. Level 2-Student Inquiry Problems, Teacher's Guide, Evaluation.
   c. Level 3-Student Inquiry Problems, Teacher's Guide, Evaluation.
3. Others: None.

I. MATERIALS AVAILABLE FREE: Project description.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: Revisions of all above materials.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 35.
2. Number of teachers having adopted all of the project materials: 10.
3. Number of teachers using some of the project materials: 81.
4. Total number of students using project materials: 10,000.
5. Totals stated are definite (1,2,3,) and estimated (4).
6. Names and locations of schools where the course is being taught:
   a. University Laboratory School, 1776 University Avenue, Honolulu, Hawaii 96822.
   b. Hawaii School for Girls, 2933 Poni Moi Road, Honolulu, Hawaii 96815.
   c. Highland Intermediate School, 1460 Hoolaulea Street, Pearl City, Hawaii 96782.
   d. Punahou School, 1601 Punahou Street, Honolulu, Hawaii 96822.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 40 hours.
   b. Summer Institute: Yes. 6 weeks.
   c. Evening classes: Yes. 6 University of Hawaii credit hours.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Our Teacher's Guide is basically a Teacher's Training Manual.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Staff evaluation of teacher-, administrative-, parent-, student-feedback.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Full scale development began in 1967. Materials were produced and tested 1968-70 at the University Laboratory School. In academic year 1970-71 FAST 1 materials were field tested in public and private schools of the state. In 1971-72 FAST 2 materials were field tested and FAST 1 materials generally disseminated through the island.

P. PLANS FOR THE FUTURE:

1. Field testing FAST 3 1972-73.
2. Further dissemination and revision of FAST 1 , FAST 2 and FAST 3 in future years.

A. PROJECT TITLE: HOWELL CANYON CONSERVATION TOUR

B. PROJECT DIRECTOR: Harold W. Blauer, 237 E. 19th, Box 638, Burley, Idaho 83318. (208)678-9451

C. PROJECT HEADQUARTERS:
   1. 237 E. 19th, Box 638, Burley, Idaho 83318.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Volunteer Agencies.

E. PROJECT HISTORY:
   1. Principal originators: Minidoka and Cassia County School Administrators with Bureau of Land Management cooperation.
   2. Date and place of Initiation: March 1969.
   3. Overall project purpose: On-site conservation information as presented by State and Federal Agencies.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. The children have an opportunity for on-site conservation information.
      b. The children are able to get acquainted with some of the experts in these fields.
      c. Classroom materials becomes more real after an on-site presentation.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: Agency materials are generally used.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: None.
   2. Development of other materials anticipated: Slides and movie films.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 12.
   2. Number of teachers having adopted all of the project materials: 24.
   3. Number of teachers using some of the project materials: 24.
   4. Total number of students using project materials: 800.
   5. Totals stated are estimated.
   6. Names and locations of schools where the course is being taught:
      a. Declo Elementary School, Declo, Idaho 83323.
      b. Dworshak Elementary School, 19th and Overland, Burley, Idaho 83318.
      c. Malta Elementary School, Malta, Idaho 83342.

d. Miller Elementary School, 1331 Normal, Burley, Idaho 83318.

M. TEACHER PREPARATION:
Teachers meet with some of the agency presenters to coordinate ideas and materials previous to the tour.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By teachers.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
In the spring of 1968 Larry Wilson of the Burley Office of the Bureau of Land Management approached the administrators of the Cassia and Minidoka School District concerning a conservation tour. It was decided after consultation that these tours would be conducted in Howell Canyon of the Sawtooth National Forest for the sixth grades of the two districts. The first two years four agencies presented material to students for 30 minutes with a brief interval between. The past two years seven agencies have presented material for periods of 45 minutes each. The extended program has been much more satisfactory for all concerned.

P. PLANS FOR THE FUTURE:
We hope to develop materials and procedures which will give the teachers a better opportunity to tie the programs together.

A. PROJECT TITLE: WILSON SCHOOL DESERT ENVIRONMENTAL STUDIES

B. PROJECT DIRECTOR: T. Moore, Principal, Wilson School, 10th and Linden, Caldwell, Idaho 83605. (208)459-9783

C. PROJECT HEADQUARTERS:
1. Wilson School, 10th and Linden, Caldwell, Idaho 83605.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 35 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: T. J. Moore, Afton Blanc, Linda Woodcook, Lenore Johnston, and John Ugarriza.
2. Date and place of Initiation: April 29, 1969, Owyhee County, Idaho.
3. Overall project purpose: To provide students the opportunity to gain first hand experience and knowledge of their role and responsibility to the environment.

F. PRESENT COMMERCIAL AFFILIATIONS: No.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. To develop a consciousness of the need for the conservation and rehabilitation of natural resources.
    b. To study the natural laws and scientific principles governing the various natural resources.
    c. To acquire a working knowledge of the science of conservation.
    d. To develop an appreciation of the dependence of man upon the natural resources of the earth.
    e. To teach that the soil, water, animal and plant resources can be conserved while being used.
    f. To develop an understanding that conservation practices for soil, water, range land, forests, and wildlife are closely interdependent and are, thus, parts of one broad conservation program.
    g. To develop an understanding of the relation between natural resources and the economic processes of man.
    h. To study some economic benefits of conservation.
    i. To develop an appreciation of the need for a comprehensive program of conservation in order to assure economic security for the community, state, nation, and the world.
2. New instructional materials being produced: Yes. 6th Grade.

H. MATERIALS PRODUCED:
1. K-6: Sixth grade - Student Field Book, Parents Handbook, Course Guides for Desert Survival, Archeology, Water, Plant Life, Effects of Fire, Soil, Weather, Maps, Geology, Desert Safety, Wildlife, and Water Shed.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
    a. Video tape for training 6th grade students in archeological field practice.
    b. Slide presentation of survival techniques.
  2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: 1.
  2. Number of teachers having adopted all of the project materials: 10.
  3. Number of teachers using some of the project materials: 50.
  4. Total number of students using project materials: 700.
  5. Totals stated are estimated.
  6. Names and locations of schools where the course is being taught: Wilson School, 10th and Linden, Caldwell, Idaho.

M. TEACHER PREPARATION:
  1. Consultative service available for teachers using the materials: No.
  2. In-service education program for teachers using the materials: Yes.
  3. Pre-service training program for teachers desiring to use the materials: Yes.
  4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 3 evenings or 12 hours.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
  5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
  6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
  1. Has the effectiveness of the materials been evaluated: Yes. By teachers using them at the end of the year. We have revised them each year.
  2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
  1. Each year we have revised our course of study which leads up to our Desert Field Experience. Half of the Field Day is devoted to exploration of individual projects.
  2. The most successful independent investigations by students have been a simulated archeological dig and survival problems.
  3. We have conducted two workshop series for teachers in the surrounding area.

P. PLANS FOR THE FUTURE:

1. We are planning two new projects in connection with our program. We hope to have a series on area wide workshops in conjunction with the Regional Environmental Education Committee. This would be to stimulate the creation of new programs in other school districts.

2. We are in the process of creating a 7th grade program focused on the mountains. This will be a follow up to our 6th grade Desert Program.

A. PROJECT TITLE: SUMMER WORKSHOP IN CONSERVATION AND ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Dr. Donald J. Obee, 329 South Phillippi, Boise, Idaho 83705. (208)344-2690

C. PROJECT HEADQUARTERS:
  1. Donnelly 4H Camp, Donnelly, Idaho 83615.
  2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 5 Resource Staff employed by the agency they represent (U.S.F.S., Fish and Game, etc.).

E. PROJECT HISTORY:
  1. Principal originators: Austin Homer, Dr. Donald J. Obee.
  2. Date and place of Initiation: 1967 - 4H Camp at Donnelly.
  3. Overall project purpose: To give elementary and junior high teachers involvement activities in conservation and environmental education they can take back to their classrooms for implementation.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVE:
  1. Objectives of the project:
    a. Create an awareness, concern and involvement in environmental education on the part of our participants.
    b. Add to their background an appreciation of the importance of man functioning as a part of nature, not as an exploiter of nature.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
  1. K-6: None.
  2. 7-12: None.
  3. Others: We use the U.S.F.S. Ciskus program model devised by Ernie McDonald for the most part.

I. MATERIALS AVAILABLE FREE: Brochure.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed: A set of kodachromes showing some of the activities.
  2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION: Not applicable. Workshop is administered as part of the summer program of Boise State College, Boise, Idaho 83707.

M. TEACHER PREPARATION: Summer workshop - one week.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By participants.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The workshop has been conducted the past five summers.

P. PLANS FOR THE FUTURE:

Additional activities are not planned.

A. PROJECT TITLE: BONNEVILLE ENVIRONMENTAL EDUCATION PROGRAM

B. PROJECT DIRECTOR: Lynn E. Olsen, Principal, Falls Valley School, 2455 Virlow Street, Idaho Falls, Idaho 83401. (208)-522-0239

C. PROJECT HEADQUARTERS:
1. School District Office, Route 1, Box 332, Idaho Falls, Idaho 83401.
2. Special facilities or activities available for visitor viewing: Yes - Summer only.

D. PRINCIPAL STAFF: 6 persons regularly employed - summer only.

E. PROJECT HISTORY:
1. Principal originators: Dr. Thomas Campbell, Mr. Reid Smith, Lynn E. Olsen.
2. Date and place of Initiation: 1967 - Warm River, Idaho.
3. Overall project purpose: To make the students more aware of their environment and how it can be conserved for future use.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: The primary objective of our program is to provide a learning situation where students may learn from nature some of the concepts that are difficult or impossible to approach in the classroom. We feel strongly that with knowledge of ecological balances and natural relationships the student will have a better chance to know how to protect and use wisely the environment for his own recreation and later commercial interests without irreparably damaging these ecological balances.
2. New instructional materials being produced: Yes. Grades 5,6,7.

H. MATERIALS PRODUCED:
1. K-6: Booklet with suggested plans for units of science activities on outdoor environmental education.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None. Limited budget and no outside funding make this impossible.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 5.
2. Number of teachers having adopted all of the project materials: 12.
3. Number of teachers using some of the project materials: 12.
4. Total number of students using project materials: 300.
5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught:

a. Ammon Junior High School, Central Avenue, Idaho Falls, Idaho 83401.

b. Lincoln Elementary School, Lincoln Road, Idaho Falls, Idaho 83401.

M. TEACHER PREPARATION:

Consultative service is available for teachers using the materials.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. During the summers of 1969 and 1970 we held 10 week programs at Warm River, near Ashton, Idaho. A new group of students were involved each week and areas with the radius of 100 miles from camp were studied including Yellowstone and Teton National Parks. Usually 30 to 40 students per week were accommodated.

2. During the summer of 1971 our camp site was changed to Pine Basin near Driggs, Idaho. This area has proved to be a very good study site and it will be used during the summer of 1972.

P. PLANS FOR THE FUTURE:

Using volunteer counselors from the area high school, we will extend the program to handle second year students.

A. PROJECT TITLE: LONG PIN CONSERVATION TOUR

B. PROJECT DIRECTOR: John A. Madden, New Meadows, Idaho 83654.
(208)347-2811

C. PROJECT HEADQUARTERS:
   1. New Meadows Ranger District - Payette N.F., New Meadows, Idaho 83654.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 10 persons regularly employed, but not specifically for this project.

E. PROJECT HISTORY;
   1. Principal originators: Joe Frazier, Glenn Youngblood and a representative from the State Department of Education.
   2. Date and place of Initiation: May 20, 1969.
   3. Overall project purpose: A one day conservation education session for 6th grade students from about 7 surrounding schools conducted by an interagency group of instructors to import basic conservation and ecological relationships to the students.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: Awaken an interest in the environment and in ecology.
   2. New instructional materials being produced: Yes. 6th grade.

H. MATERIALS PRODUCED:
   1. K-6: We produce a lesson plan each year for each of seven field stations. Individuals again reproduce a slightly different lesson plan each year.
   2. 7-12: None.
   3. Others: None.

I. MATERIALS AVAILABLE FREE: None

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: None.
   2. Development of other materials anticipated: Firm lesson plans which will be used each and every year plus preparatory materials for the teachers to build the students up for the one day field trip.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 7.
   2. Number of teachers having adopted all of the project materials: 7.
   3. Number of teachers using some of the project materials: 7.
   4. Total number of students using project materials: 200.
   5. Totals stated are definite.

6. Names and locations of schools where the course is being taught:

  - a. New Meadows Elementary School, New Meadows, Idaho 83654.
  - b. Cascade Elementary School, Cascade, Idaho 83611.
  - c. Council Elementary School, Council, Idaho 83612.
  - d. McCall-Donnelly Elementary School, McCall, Idaho 83638.
  - e. Cambridge Elementary School, Cambridge, Idaho 83610.
  - f. Midvale Elementary School, Midvale, Idaho 83645.
  - g. Riggins Elementary School, Riggins, Idaho 83549.

M. TEACHER PREPARATION:
Consultative service is available for teachers using the materials.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
One field day each year since 1969.

P. PLANS FOR THE FUTURE:
We plan to continue at the present level although we will refine the approach.

A. PROJECT TITLE: OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Contact person is Kenneth Crother, P.O. Box 20, Shoshone, Idaho 83352. (208)886-2338

C. PROJECT HEADQUARTERS:
1. 409 South Apple Street, Shoshone, Idaho 83352.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: None - all volunteer.

E. PROJECT HISTORY:
1. Principal originators: Mrs. Begie Hatmaker, Mr. James Pate, Mr. Kenneth Crothers.
2. Date and place of Initiation: October 1969.
3. Overall project purpose: To acquaint elementary school students with the conservation and environmental control being practiced by various agencies in this area.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To provide outdoor, on-site experiences in conservation and environmental control for elementary school students.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 3.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: 4.
4. Total number of students using project materials: 70.
5. Totals state are estimated.
6. Names and locations of schools where the course is being taught: Not answered.

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
For three years beginning in October 1969, the three school districts in Lincoln County have conducted a field trip in conservation for

all fifth grade students. Agencies of federal, state, and local government have provided field stations demonstrating conservation practices. These agencies (Forest Service, B.L.M., A.S.C., A.S.C.S., Fish and Game, County Extension) have worked cooperatively with the schools to prepare a field trip booklet for use before and during the trip. Each teacher determines the extent of coverage in her own classroom.

P. PLANS FOR THE FUTURE: No.

A. PROJECT TITLE: APPLIED BIOLOGICAL SCIENCE

B. PROJECT DIRECTOR: Robert L. Williamson, 600 Miller Street, Carthage, Illinois 62321. (217)357-2136

C. PROJECT HEADQUARTERS:
1. Carthage High School, 600 Miller Street, Carthage, Illinois 62321.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: One person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Robert L. Williamson, Carthage High School.
2. Date and place of Initiation: September 1970.
3. Overall purpose: To provide underachievers, not capable of success in a regular science program, a different approach to science through the use of a land laboratory and hands-on experiments in Conservation and Ecology.

F. PRESENT COMMERCIAL AFFILIATIONS:
Have been working with A. B. Morse, Chicago, on tree and shrub identification.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To prepare students with a background in plant and animal identification, care and maintenance.
   b. To develop an understanding of the use of conservation practices as it relates to ecology.
2. New instructional materials being produced: Yes. 9th grade.

H. MATERIALS PRODUCED: Not available at the present time.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 1.
3. Number of teachers using some of the project materials: 3.
4. Total number of students using project materials: 18.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught: Not answered.

M. TEACHER PREPARATION: None.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:
Change in program structure.

A. PROJECT TITLE: CRYSTAL LAKE OUTDOOR EDUCATION PROGRAM

B. PROJECT DIRECTOR: Norbert Ziemer, 330 North Main Street, Crystal Lake, Illinois 60014. (815)459-5557

C. PROJECT HEADQUARTERS:
1. 330 North Main Street, Crystal Lake, Illinois 60014.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Crystal Lake School District #47 and the Crystal Lake Park District.
2. Date and place of Initiation: July 1, 1967.
3. Overall project purpose: To facilitate and vitalize learning through direct meaningful experiences; to make environmental education real through involving the learner in the problem-solving approach to practical situations.

F. PRESENT COMMERCIAL AFFILIATIONS: No.

G. PROJECT OBJECTIVES:
1. Objectives of the project: The primary aim of this program is to assist and aid teachers to increase children's understandings and appreciation of science and the natural environment outdoors, to develop and improve the scientific attitude and thinking in children, and to increase children's interests in science and the outdoors.
2. New instructional materials being produced: Yes. K-12.

H. MATERIALS PRODUCED:
1. K-6:
   a. Resource guides.
   b. Sample "Tips" bulletins.
   c. Sample lesson plans and worksheets.
   d. Resident Program Teachers' Guide.
   e. Outdoor Education Resident Program Students' Handbook.
2. 7-12:
   a. Curriculum guides.
   b. Resource guides.
   c. Sample "Tips" Bulletins.
3. Others: "Legends and Lore of Plants in Veteran Acres Park".

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
1. Sample "Tips" bulletins (18 copies per year).
2. Primary Resource guide.
3. Intermediate Resource guide.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Slide series on curriculum areas as needed; i.e., winter birds, spring birds, etc.
2. Development of other materials anticipated: Teacher Handbook for Resident Program.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 20.
2. Number of teachers having adopted all of the project materials: All.
3. Number of teachers using some of the project materials: 350.
4. Total number of students using project materials: 15,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Outdoor Education techniques are being implemented in:
    - a. North School, Woodstock Street, Crystal Lake, Ill. 60014.
    - b. Immanuel Lutheran School, 174 McHenry, Crystal Lake, Ill. 60014.
    - c. Coventry School, Wellington Drive, Crystal Lake, Ill. 60014.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes. ½day, 1-2 hours.
    - b. Summer Institute: Yes. 3 days.
    - c. Evening classes: No.
    - d. Others: Outdoor Education-related courses taught at the McHenry County College.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. University evaluators - Dr. Malcolm Swan, Northern Illinois University, Dr. George Donaldson, Northern Illinois University Taft Campus at Oregon, Illinois.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:

1. Additional teacher in-service sessions,
2. Additional teacher aides.
3. Prepared materials, worksheets, trail guides, etc.

A. PROJECT TITLE: ENVIRONMENTAL ISSUES

B. PROJECT DIRECTOR: Mrs. Bettye G. Kaplan, York Community High School, 355 St. Charles Road, Elmhurst, Illinois 60126. (312)TE4-9400

C. PROJECT HEADQUARTERS:
   1. Same as B.
   2. Special facilities or activities available for visitor viewing: Yes. A resource center.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Mrs. Bettye G. Kaplan and Keith Olson.
   2. Date and place of Initiation: Development work started in June 1970; course initiated September 1971.
   3. Overall purpose: To develop, teach, and continue to refine a high school course emphasizing current environmental issues from an interdisciplinary approach - evaluation and the appropriate course modifications are an integral part of the project.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: See E-3.
   2. New instructional materials being produced: Yes. Grades 10-12.

H. MATERIALS PRODUCED:
   1. K-6: None.
   2. 7-12: None.
   3. Others:
      a. 10-12 inclusive, to be used for students who have studied one year of biology.
      b. Environmental Issues - A Study Guide by Bettye Kaplan.
      c. Project Outlines by Keith Olson.
      d. Guides to use of resource center by B. Kaplan.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: None.
   2. Development of other materials anticipated: An annual updating of the manual and project outlines is anticipated.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 1.
   2. Number of teachers having adopted all of the project materials: 2.
   3. Number of teachers using some of the project materials: None.
   4. Total number of students using project materials: 50.
   5. Totals stated are definite.

6. Names and locations of selected schools where the course is being taught: York Community High School, 355 W. St. Charles, Elmhurst, Illinois 60126.

M. TEACHER PREPARATION: None.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Establishment of resource center.

P. PLANS FOR THE FUTURE:
Continuation of present program.

A. PROJECT TITLE: DEKALB COUNTY NATURAL RESOURCE CENTER

B. PROJECT DIRECTOR: Ward Miller, Box 264, Genoa, Illinois 60135.
(815)784-3815

C. PROJECT HEADQUARTERS:

1. Box 264, Genoa, Illinois 60135.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:

1. Principal originators: DeKalb County Conservation Committee (DeKalb Soil and Water Conservation District), Superintendents of DeKalb County School, Mrs. Beverly Southern.
2. Date and place of Initiation: March 1967.
3. Overall project purpose: To encourage, develop and operate a program of environmental and outdoor education for DeKalb County children and teachers.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:

1. Objectives of the project:
    a. For the child to acquire broad environmental understandings.
    b. For the child to develop a social conscience in respect to the environment.
    c. For the child to behave with respect and responsibility toward the environment.
    d. For the child to identify with the natural environment.
    e. For the teacher to acquire knowledge of, respect for, and intellectual stimulation from natural resources education.
    f. For the teacher to develop self confidence in the use of unfamiliar materials and environments for teaching purposes.
    g. For the teacher to accept the philosophy of Natural Resource Education as good and its materials as relevant to the job of teaching.
    h. For the community to recognize resource problems and to learn how to achieve environmental quality.
    i. For the community to learn while it enjoys a facility for educational recreation.
2. New instructional materials being produced: At the present time our project is running at a minimum level and the staff has little time for new instructional materials development.

H. MATERIALS PRODUCED:

1. K-6:
    a. Curriculum materials for K-6 (10 concepts and class activities) for 15 different school systems.
    b. Newsletter - The Web - produced quarterly.
    c. Curriculum materials for use of North Grove School (one

room school house used to study resource use and redefinition.
    d. Several tapes for guiding in doing various environmental studies outside by classroom teachers (change, animal habitats, light, water erosion, etc.).
  2. 7-12:
    a. Most of the materials used with this level are in the form of data sheets.
    b. Newsletter - The Web - produced quarterly.
  3. Others: Film - "To Live on Earth" - Guide that describes the development of a trail for the handicapped now near completion at our center. Designed by Dr. Donald Hammerman and Dr. Milo Pritchett of Northern Illinois University.

I. MATERIALS AVAILABLE FREE: At the present time our budget is so limited we are unable to provide materials free of charge.

J. MATERIALS PURCHASABLE:
  1. Film - "To Live on Earth"- Purchase from Northern Illinois University for about $100.00.
  2. Newsletter - The Web - $.50 an issue.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
    a. Curriculum materials to study redefinition of natural resources.
    b. More tapes to guide outdoor studies.
    c. Environmental activities.
    d. Special teaching stations and activities for handicapped.
  2. Development of other materials anticipated: Environmental super 8mm films with sound (5 minutes long), many of which will be open-ended.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: 11 school systems in the county are using center materials.
  2. Number of teachers having adopted all of the project materials: Unknown.
  3. Number of teachers using some of the project materials: Unknown.
  4. Total number of students using project materials: 9,000 county students (K-12) use some of our materials.
  5. Totals stated are estimated.
  6. Names and locations of schools where the course is being taught:
    a. DeKalb Community School District #428, DeKalb, Ill.
    b. Sycamore School District #427, Sycamore, Ill
    c. Genoa-Kingston School District #424, Genoa, Ill.
    d. Waterman Schools #431, Waterman, Ill

M. TEACHER PREPARATION:
  1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   - a. Workshops: Yes. School site workshops ($1\frac{1}{2}$ hours), Mini workshops (15 minutes - 1 hour), Grade level workshops (1 day), 20 hour environmental workshop.
   - b. Summer Institute: No.
   - c. Evening classes: No.
   - d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By Title III - ESEA, and OSPI - State of Illinois.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Quarterly produced Newsletters - "The Web".
2. Served approximately 35,000 students and teachers.
3. Construction of 3,000 square feet interpretive facility.
4. Construction of 80' foot bridge.
5. Special programs for county citizen groups.
6. Renovation of one room school house (used in study of redefinition of natural resources).
7. Construction of a specially designed trail for the handicapped (coordinated by DeKalb Junior Womens Club).
8. Development of integrated (science and social studies) environmental curriculum materials.
9. Production of film - "To Live On Earth".
10. On November 1, 1971 the Center was recognized as one of eight outstanding educational projects in the state of Illinois by the Illinois Elementary School Principals Association.

P. PLANS FOR THE FUTURE:

1. Development of environmental forum consisting of county students representatives from county schools (6-12). Purpose to monitor environmental quality in DeKalb County, Illinois.
2. Expansion of center staff and offering workshops to teachers outside the county.
3. Increase in the development of curriculum materials.

A. PROJECT TITLE: OPERATION SURVIVAL THROUGH ENVIRONMENTAL EDUCATION TITLE III ESEA

B. PROJECT DIRECTOR: Mr. Ray E. Miller, 809 W. Exchange Street, Jerseyville, Illinois 62052. (618)498-5774

C. PROJECT HEADQUARTERS:
   1. Pere Marquette State Park, Grafton, Illinois 62037.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 9 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Not answered.
   2. Date and place of Initiation: July 1, 1970.
   3. Overall project purpose: To provide educational experiences to effect behavioral changes in students and teachers that will improve and maintain environmental conditions for healthful living.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: The project will provide opportunities to learn about environmental issues in the classroom and in the field for students and teachers in grades kindergarten through senior high school.
   2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Instructional Land Unit.
      b. Instructional Air Unit.
      c. Natural Resources Slide - Tape Series.
      d. Ecology.
   2. 7-12:
      a. Instructional Land Unit.
      b. Natural Resources Slide - Tape Series.
      c. Ecology.
   3. Others: None.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not available for purchase.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed:
      a. Instructional Water Unit for 7-12.
      b. Instructional Air Unit for 7-12.
   2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION: (Materials are supplemental to science and social studies.)

1. Number of schools now using entire set of materials: 4 school districts.

2. Number of teachers having adopted all of the project materials: 203.

3. Number of teachers using some of the project materials: Not answered.

4. Total number of students using project materials: 5,297.

5. Totals stated are definite.

6. Names and locations of schools where the course is being taught:
   a. West Elementary School, 1010 W. Carpenter Street, Jerseyville, Illinois.
   b. Shipman Elementary School, Shipman, Illinois.
   c. Godfrey Elementary School, Godfrey, Illinois.
   d. Bethalto West Elementary School, Bethalto, Illinois

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes - 3 hours.
   b. Summer Institute: No.
   c. Evening classes: Yes. Sponsored extension course from local University.
   d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. The previously listed instructional units and supplemental aids are used in the pre and in-service training.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Is now being carried out.

2. Pertinent published research: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. July 1970 - June 1971: Research, gathering of materials, initial writing, conducted general field experiences for 13,500 students (K-12) mainly in grades K-6.

2. July 1971: Wrote first complete unit (K-12), field experiences more detailed, conducted in-service training, developed supplemental teaching aids.

P. PLANS FOR THE FUTURE:

Revision and up-dating of materials now developed.

A. PROJECT TITLE: ENVIRONMENTAL CONSERVATION

B. PROJECT DIRECTOR: Dale L. Barthel, 124 Willow Road, Rochester, Ill. 62563. (317)637-7603

C. PROJECT HEADQUARTERS:
   1. Route 29, Rochester, Illinois 62563.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Dale L. Barthel.
   2. Date and place of Initiation: January 1971.
   3. Overall project purpose: Develop a broad overview of awareness of environmental conservation need.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: To provide urban area students with a better understanding of total conservation needs.
   2. New instructional materials being produced: Yes. Grades 9-12.

H. MATERIALS PRODUCED:
   1. K-6: None.
   2. 7-12: General outline.
   3. Others: None.

I. MATERIALS AVAILABLE FREE: Course outline.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: Tapes.
   2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 3.
   2. Number of teachers having adopted all of the project materials: 3.
   3. Number of teachers using some of the project materials: 10.
   4. Total number of students using project materials: 30.
   5. Totals stated are estimated.
   6. Names and locations of schools where the course is being taught:
      a. Rochester High School, Route 29, Rochester, Ill.
      b. Pleasent Plaines High School, Pleasent Plaines, Ill.
      c. Assumption High School, Assumption, Ill.

M. TEACHER PREPARATION:
   Evening classes of 10 week duration are available for teachers.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Reorganized course into a environmental conservation discipline.

P. PLANS FOR THE FUTURE:
Develop individual units from the main outline.

A. PROJECT TITLE: SYCAMORE FFA COOPERATIVE

B. PROJECT DIRECTOR: James W. Guilinger, Albert Avenue, Sycamore, Illinois 60178. (815)895-2138

C. PROJECT HEADQUARTERS:
1. Albert Avenue, Sycamore High School, Sycamore, Illinois 60178.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Mr. Robert Howey - former Vocational Agriculture Teacher.
2. Date and place of Initiation: January 1, 1960 - Sycamore High School.
3. Overall purpose: To enable city students to become involved in agriculture with a supervised experience program in all areas of agriculture.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To expose city students to knowledge and skills involved in the operation of all types of farm equipment, livestock, turf propagation, and landscape design. Areas in the operation of cooperatives through activities in buying and selling are also studied and used by the students enrolled. The Sycamore FFA Cooperative did over $23,000 worth of business in 1971. Skills in the operation of a small chapter nursery are also conducted by the students.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: Records of the Sycamore FFA Cooperative.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
104 students are involved in the project.

M. TEACHER PREPARATION: None.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Sycamore FFA Chapter Cooperative operates 160 acres of farm land, owns approximately $12,000 worth of farm equipment such as tractors, tillage equipment, a combine, 60 head of registered

Southdown sheep, and buildings and equipment to house this livestock in two different areas at once. The chapter also operates a small chapter nursery with tree plantings which are used in landscaping activities on 5 school grounds in the district. The entire operation is conducted to benefit the city student who is interested in an agricultural career. All students may enter the released time program to become employed on the job in an area agricultural business as juniors and seniors.

P. PLANS FOR THE FUTURE:

Expansion of agricultural areas of greenhouse management with the construction of a greenhouse owned by the Sycamore FFA Chapter Cooperative. Students will receive instruction in plant propagation, greenhouse management, and other horticultural areas.

A. PROJECT TITLE: OPERATION AWARENESS

B. PROJECT DIRECTOR: Terry Tichenor, 111 North Tekoppel Avenue, Evansville, Indiana 47712. (812)423-4222

C. PROJECT HEADQUARTERS:
1. 111 North Tekoppel Avenue, Evansville, Indiana 47712.
2. Special facilities or activities available for visitor viewing: Yes. A visit to the outdoor class, color slides, and photographs.

D. PRINCIPAL STAFF: 1 person regularly employed, 2 persons part-time.

E. PROJECT HISTORY:
1. Principal originators: Project director and school principal
2. Date and place of Initiation: September 1970 - Tekoppel School.
3. Overall purpose: To make students aware of the intricate balance of nature and realize the interrelationship and interdependence of all things in their environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Change the behavior pattern of students by making them aware of the living world - a change toward conservation rather than desecration of their environment.
2. New instructional materials being produced: Yes. A K-8 handbook for the inner city, suburban, and rural schools in the Vanderburgh County School Corporation. Handbook will include environmental education activities.

H. MATERIALS PRODUCED:
A K-8 handbook is in the process of being produced.

I. MATERIALS AVAILABLE FREE:
A paper introducing the program.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Slide series with cassette tape, film loop - super 8, on studying the ecosystems in the outdoor classroom.
2. Development of other materials anticipated: A series of activities to be carried out by groups within a class.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: 3.
4. Total number of students using project materials: 200.
5. Totals stated are estimated.

6. Names and locations of selected schools where the course is being taught: Not answered.

M. TEACHER PREPARATION:

1. Consultatant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Under development.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1½ hours for 5 sessions.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: In the process of being evaluated.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. 8th grade ecological studies in the outdoor classroom.
2. 8th grade project (Trash) - research on kinds of trash around the school - clean up campaign.
3. Ban the Can campaign - petition not to buy drinks in cans.
4. Operation first grade - eighth grade took the first grade into the outdoor classroom to show them what they had learned.

P. PLANS FOR THE FUTURE:

1. 7th and 8th grade recycle campaign - newspaper, cans, glass etc.
2. IMPACT EQ - this is Tekoppel's environmental club. To become a member, students must do something of an Improvement Action on the Environmental Quality.

A. PROJECT TITLE: INNER-CITY RESIDENT OUTDOOR SCHOOL

B. PROJECT DIRECTOR: Dr. Magdalene A. Davis, 120 East Walnut Street, Indianapolis, Indiana 46204. (317)634-2361

C. PROJECT HEADQUARTERS:
   1. Bradford Woods, R.R. 1, Martinsville, Indiana 46151.
   2. Special facilities or activities available for visitor viewing: Yes. Many outdoor forms and materials.

D. PRINCIPAL STAFF: Classroom teachers, resource staff, volunteers.

E. PROJECT HISTORY:
   1. Principal originators: Dr. Magdalene A. Davis, Consultant Outdoor Education; Classroom teachers, Curriculum Council, Outside Resource Staff-State Department, Universities and Conservation Groups.
   2. Date and place of Initiation: April 1966. Camp Gallahue, Brown County.
   3. Overall project purpose:
      a. Urban Inner-City need outdoor learning experiences.
      b. Social behavior.
      c. Health and recreational learning with educational learning emphasis.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: Not answered.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Scholastic.
      b. Earth Corps.
      c. S.E.E. Hayes Arboretum.
   2. 7-12: Scholastic.
   3. Others: Exchange Bloomington and other schools.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: Slide and tape stories from schools.
   2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 114.
   2. Number of teachers having adopted all of the project materials: 75.

3. Number of teachers using some of the project materials: 50.
4. Total number of students using project materials: Not answered.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. School #84, 440 E. 57th Street, Indianapolis, Ind. 46220.
    b. School #107, 3307 Ashway Drive, Indianapolis, Ind. 46224.
    c. School #33, 1119 N. Sterling St., Indianapolis, Ind. 46201.
    d. School #27, 545 E. 19th Street, Indianapolis, Ind. 46202.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes - 1 day, afternoon or weekend.
    b. Summer Institute: Yes - 2 days.
    c. Evening classes: Yes - 2 hours.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. Tests - Title I Program.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: K-12 year round program.

A. PROJECT TITLE: SEE SELF-EARTH ETHIC (formerly SYSTEM FOR ECOLOGICAL EDUCATION)

B. PROJECT DIRECTOR: John W. Hart and Jessie M. Turner, 801 Elks Road, Richmond, Indiana 47374.

C. PROJECT HEADQUARTERS:
1. Hayes Regional Arboretum, 801 Elks Road, Richmond, Indiana 47374.
2. Special facilities or activities available for visitor viewing: Yes. All SEE materials.

D. PRINCIPAL STAFF: The authors work part time on the project.

E. PROJECT HISTORY:
1. Principal originators: Authors with advice from Dr. Clyde W. Hibbs, Ball State University.
2. Date and place of Initiation: June 1971. Project (in part) was presented to graduate school, Ball State University.
3. Overall project purpose:
   a. Provide K-12 curriculum guide for the development of an environmental ethic based on SELF: A Part of Earth.
   b. Provide a framework for making all levels of education cumulative.

F. PRESENT COMMERCIAL AFFILIATIONS:
Research and development is financed as a support project of the Stanley W. Hayes Research Foundation, Inc. Authors are arranging publication by a commercial firm.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Provide a systematic approach to environmental education which will enhance the students' learning experiences and make the teaching of environment/ecology pleasant and rewarding to the educator.
   b. SEE emphasizes ethical responsibilities thereby encouraging environmentally compatible behavior by both teachers and students.
2. New instructional materials being produced: Yes. Eight Guide Books for use K-12 or in college preparation of teachers.

H. MATERIALS PRODUCED:
1. K-6: Guide books in seven levels.
2. 7-12: Above guide books will be used, followed by Guide Book number eight.
3. Others: None.

I. MATERIALS AVAILABLE FREE: A limited number of guide books will be available by arrangement with the authors.

J. MATERIALS PURCHASABLE:
Level One guide book available from The Interstate Printers and

Publishers, Danville, Illinois.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Levels 2-8 are currently being tested. They will be made available not later than September 1973.
2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:

Nearly 100 sets of the system have been distributed to schools. We do not know to what extent they are being used. About 150 kindergarten schoolrooms will use the new level one materials in Indianapolis, Indiana in the fall of '72. An additional 36 classrooms grades 1-6 will test levels 2-7.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes. In cooperation with Hayes Arboretum.
3. Pre-service training program for teachers desiring to use the materials: Yes. Authors present graduate level courses for teachers - credit from Ball State University.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes, when requested by teachers.
    b. Summer Institute: Yes. Graduate courses at Hayes Arboretum, credit by Ball State University.
    c. Evening Classes: No.
    d. Others: Arboretum uses SEE as basis for field experience given to grade school classes which visit Arboretum.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: Level One Guide Book available now.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Not adequately. Teachers using the old SEE materials have reported satisfactory results, but we do not have a testing instrument to measure changes in students.
2. Pertinent published research studies: SEE is based to a large extent on the concept list developed by Robert E. Roth. Roth, Robert E., M. O. Pella, and C. A. Schoenfeld, "Environmental Management Concepts--a List", Tech. Rept. 126, University of Wisconsin, 1970.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Included in remarks under A through N.

P. PLANS FOR THE FUTURE:

1. Continuous review and revision of the existing and any new materials created.

2. Development of new courses for teachers to encourage environmental education in schools, emphasis on the use of SEE as an educational tool.

A. PROJECT TITLE: PROJECT ECO - AN ENVIRONMENTAL CURRICULUM OPPORTUNITY

B. PROJECT DIRECTOR: Dr. Luther Kiser, Assistant Superintendent for Curriculum and Instruction, Ames Community School District, 120 South Kellogg, Ames, Iowa 50010. (515)232-3400

C. PROJECT HEADQUARTERS:
1. Ames Community School District, 120 South Kellogg, Ames, Iowa 50010.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 4 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Ames Community Schools under the direction of Dr. Luther Kiser, Director of Curriculum and Instruction; funded under Title III, ESEA.
2. Date and place of Initiation: May 1971 - Ames, Iowa.
3. Overall project purpose: The purpose of this project is to broaden and enrich the base of activities in the Ames community schools, both elementary and secondary, related to the understanding and preservation of the environment. The major emphasis is to develop a controlled system that provides for learning outside the classroom. Student awareness of the complexity of the environment should be increased. It has been said that awareness is a prerequisite to commitment, and commitment is a prerequisite to action.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Students will engage in activities appropriate to their level of maturation which will include observation, investigation and evaluation of a variety of ecological relationships and conservation practices in central Iowa in order to develop the concept of stewardship of natural resources.
   b. Teachers will support the major objective and assist in its accomplishment as a result of the activities of this project.
2. New instructional materials being produced: Yes.
   a. Elementary, both primary and intermediate (in process).
   b. Junior high (in process).
   c. Senior high (summer 1972).

H. MATERIALS PRODUCED:
1. K-6: Field activity packets - coordinated as to grade level, time of year, and location.
2. 7-12: Field activity packets - coordinated as to grade level, time of year, and location.
3. Others: Guide sheets for local historical museums and science centers for use by teachers.

I. MATERIALS AVAILABLE FREE:

1. Newsletters - report of field activities.
2. Brochures - depicting mobile laboratory.
3. Two-page hand-out giving brief description of project.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Super 8 mm film to describe project; color slides of all activities of the field trips; black and white photos of field activities.
2. Development of other materials anticipated: Independent photo study packets giving step-by-step techniques involved in various activities.

L. PROJECT IMPLEMENTATION:

1. Number of schools now involved in project activities: 14.
2. Number of teachers having adopted all of the project materials: 70.
3. Number of teachers using some of the project materials: 40.
4. Total number of students using project materials: 3,500.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
   a. Northwood Elementary School, 601 28th Street, Ames, Iowa 50010.
   b. Whittier Elementary School, 120 South Hazel, Ames, Iowa 50010.
   c. Central Junior High School, 515 Clark Avenue, Ames, Iowa 50010.
   d. Ames Senior High School, 20th and Ridgewood, Ames, Iowa 50010.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 3 half-day sessions.
   b. Summer Institute: Yes. 4 weeks.
   c. Evening classes: Yes. 6 two-hour sessions.
   d. Others: Field trips with project teacher - model.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

Formal evaluation document in preparation.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Project developed during school year 1970-71. Approved by Iowa State Board of Education for funding under Title III ESEA to begin May, 1971. Mobile units developed during summer and fall, 1971; and field trips started fall, 1971. Living laboratory on a school site started in summer, 1971.

P. PLANS FOR THE FUTURE:

The next major implementation of Project ECO will begin summer, 1972 with junior and senior high school students in prolonged field-research trips. Funding approval will allow other groups of students in elementary and junior high to participate in field experiences during the 1972-73 school year.

1. The second 40-foot mobile science lab will go into operation, increasing the number of students included in project activities.
2. Activities development based on the prolonged field-research trips of junior and senior high students during the summer of 1972 will continue.

A. PROJECT TITLE: HANDICAPPED CHILDREN'S NATURE STUDY CENTER

B. PROJECT DIRECTOR: David N. Lanaghan, 1226 E. Rusholm, Davenport, Iowa 52803. (319)322-3060

C. PROJECT HEADQUARTERS:
1. 1523 S. Fairmount, Davenport, Iowa 52802.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 person employed full-time, 2 persons employed part-time.

E. PROJECT HISTORY:
1. Principal originators: The program was originally conceived in 1968 by Joe Moore, Science Consultant, and Jim Kay, Assistant Director of Special Education, both of the Muscatine-Scott County School System.
2. Date and place of Initiation: The idea was presented to Dr. Paul Staskey, Director of Research and Development and application for federal funds was made in early 1969.
3. Overall project purpose: The purpose of environmental or outdoor education and the Handicapped Children's Nature Study Center is to provide actual learning experiences in, about, and for the out-of-doors for handicapped students throughout Area IX.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. A major objective of the program is to provide these students with experiences and knowledge that they can use outside their school classes on their own, with friends, and/or with their families.
   b. To develop in children an awareness of and appreciation for their natural environment.
2. New instructional materials being produced: Yes. Instructional materials for Special Education programs Pre-School through 12th grade.

H. MATERIALS PRODUCED: Special Education Programs - Pre-School through 12th grade:
1. Mini-Explorations of Our Environment.
2. Observing Our Environment Through Our Senses.
3. Teacher Guide - Winter Wander.
4. Teacher Guide - Spring Saunter.
5. Teacher Guide - Tree Planting.
6. Teacher Guide - Fall Walk.
7. The Acorn - Periodic Newsletter.
8. Teacher Guide - Tracking.
9. Teacher Guide - Dike Hike.

I. MATERIALS AVAILABLE FREE:

All materials listed are available free except:

1. Mini-Explorations of Our Environment.
2. Observing Our Environment Through Our Senses.

J. MATERIALS PURCHASABLE:

Unit I - "Observing Our Environment Through Our Senses".
Unit II - "Mini-Explorations of Our Environment".
Cost - $2.00 per unit or $3.50 for the two units combined.
Checks should be made payable to: Chuck Wester, Fairmount School, 1523 S. Fairmount, Davenport, Iowa 52802.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: None.
2. Development of other materials anticipated: Materials which would expand our environmental education program for pre-school through 12th grades.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 4.
2. Number of teachers having adopted all of the project materials: 12.
3. Number of teachers using some of the project materials: 105.
4. Total number of students using project materials: 144.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Kennedy School, 899 Climber Street, Muscatine, Iowa.
    b. Taylor School, 1430 Warren Street, Davenport, Iowa.
    c. Mid-Park School, Welton, Iowa.
    d. Center for Children with Learning Problems - Fairmount School, 1523 S. Fairmount Street, Davenport, Iowa.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 week.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Materials listed under H.
6. Commercial availability of materials: Muscatine-Scott County School System, Fairmount School, 1523 S. Fairmount Street, Davenport, Iowa 52802.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Consultant, Assistant Director of Special Education, Teachers, Program Director.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. 20' x 40' building is complete.
2. Paved trails complete.
3. Consultant travels to schools working with teachers and students in their own immediate environment.
4. Expanded program making our services available to more schools.

P. PLANS FOR THE FUTURE:

1. Six week environmental education summer program is in the planning.
2. Currently working on more specific activities and experiences for the pre-school and secondary special education students.

A. PROJECT TITLE: CONSERVATION ECOLOGY AND ENVIRONMENTAL PROBLEMS - CONSERVATION I
ADVANCED CONSERVATION SEMINAR AND PROJECTS - CONSERVATION II

B. PROJECT DIRECTOR: Harold G. Lincoln, Maquoketa Valley Community High School, Delhi, Iowa 52223.

C. PROJECT HEADQUARTERS:
   1. Maquoketa Valley Community High School, Delhi, Iowa 52223.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: No persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originator: Harold G. Lincoln.
   2. Date and place of Initiation: 1963. Maquoketa Valley Community High School.
   3. Overall project purpose: One of the urgent educational tasks of our times is that of alerting the American public to the problems of conservation. This task must, in large part, be accomplished through our schools. To be effective, conservation education must permeate all levels of learning, must arouse genuine concerns for the future, and must capture the imagination of youth. Classroom experiences are not enough; it must include actual experiences that involve the student personally.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To promote a better understanding of man's environment.
      b. Understand conservation - its nature and meaning.
      c. To note the interrelationships in the many fields of earth resources and its value to people in all walks of life.
      d. The awareness of the interuse and misuse of our resources - living and non-living.
      e. The dangers of mass pollutions and population menace on our planet earth.
      f. Understand what must be done to permeate our living conditions for the future.
      g. To arouse concern and action.
      h. An ecological approach for real understanding of life on earth.
      i. What can be done to improve or recycle our environment.
      j. To instill the philosophy that man needs a clean environment.
      k. Instill aesthetic and mental health needs from outdoor recreation for spiritual richness in living the good and whole life.

2. New instructional materials being produced: Yes. Grades 10 through 12.

H. MATERIALS PRODUCED:

1. K-6: None.
2. 7-12: Course of study, tests, reference materials, resource materials, library resource facilities, projects.
3. Others: Programed field trips, individual projects and research.

I. MATERIALS AVAILABLE FREE:

1. Course of study for Conservation I and II.
2. Tests.
3. Some projects.
4. Youth Club organization.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: None.
2. Number of teachers having adopted all of the project materials: None.
3. Number of teachers using some of the project materials: None.
4. Total number of students using project materials: 40.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: Not answered.

M. TEACHER PREPARATION: Teaching materials are available for educators to use in preparing teachers.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Iowa State Department of Public Instruction Evaluation Team.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Made Conservation (Ecology, Environment and problems) a part of the school curriculum, giving unit credit as a separate subject.
2. Conducted outdoor classes.
3. Field trips - about 500 miles annually.
4. Community and School Ecology Day - yearly.
5. Assembly programs by students on environment.
6. Hi-Teen Outdoor Club - meets each month.
7. State speech contests - ASCS sponsored.
8. Tree planting in spring for farmers.
9. Camp-outs.

P. PLANS FOR THE FUTURE:

1. Purchase or lease land for development in areas for educational

use in conservation, ecology, projects.
2. Build a nature center.
3. Teach life time recreational activities that children will carry over into adulthood.

A. PROJECT TITLE: DOLLIVER PARK OUTDOOR CLASSROOM

B. PROJECT DIRECTOR: Lyle Baker, 5 North 16th Street, Fort Dodge, Iowa 50501. (515)576-1161

C. PROJECT HEADQUARTERS:
   1. 5 North 16th Street, Fort Dodge, Iowa 50501.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: None specifically for the project.

E. PROJECT HISTORY:
   1. Principal originators: Not answered.
   2. Date and place of Initiation: 1966.
   3. Overall purpose: Promote conservation.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES: Not answered.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:
   We hope to make this into a longer outdoor experience for these children, possibly into an overnight experience covering several academic areas.

A. PROJECT TITLE: NATURE TRAIL AND OUTDOOR LABORATORY

B. PROJECT DIRECTOR: Lloyd Fugate, 724 S. 53rd St., Kansas City, Kansas 66106. (913)287-4462

C. PROJECT HEADQUARTERS:
1. Turner Unified School District, 1800 South 55th Street, Kansas City, Kansas 66106.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: None, specifically for project.

E. PROJECT HISTORY:
1. Principal originators: Dr. Sanford Witter, Mr. T. R. Palmquist, Mr. Lloyd Fugate.
2. Date and place of Initiation: Not answered.
3. Overall project purpose: To provide an accessible nature area for use by teachers, students, and the general public.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Not answered.
2. New instructional materials being produced: For grades 7-12 and for the public.

H. MATERIALS PRODUCED:
1. K-6: Not answered.
2. 7-12: Not answered.
3. Others:
   a. Teachers Guides to the use of the trail.
   b. Public Guide to the use of the trail.

I. MATERIALS AVAILABLE FREE: Teachers Guides and Public Guide.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: A series of 35mm slides.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 7.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: 8.
4. Total number of students using project materials: 400.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. Morris Elementary School.
   b. Oak Grove Elementary School

c. Pierson Junior High School, 1800 S. 55th St., Kansas City, Kansas 66106.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: No.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes. 1 day.
    b. Summer Institute: No.
    c. Evening Classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Completion of trail.
2. Work on booklets for use by teachers and public.

P. PLANS FOR THE FUTURE:

1. More work on booklets.
2. Wildlife plantings.
3. Set out more trees.

A. PROJECT TITLE: SHAWNEE MISSION ENVIRONMENTAL SCIENCE LABORATORY

B. PROJECT DIRECTOR: Richard G. Dawson, 5800 W. 107th, Shawnee Mission, Kansas 66207. (913)648-3005

C. PROJECT HEADQUARTERS:
1. 5800 W. 107th, Shawnee Mission, Kansas 66207.
2. Special facilities or activities available for visitor viewing: Yes. 25 acre outdoor laboratory.

D. PRINCIPAL STAFF: 6 persons regularly employed as biology teachers in adjacent Shawnee Mission South High School.

E. PROJECT HISTORY:
1. Principal originators: Biology Teachers' committee chaired by Jerry Murray; Assistant Superintendent of Shawnee Mission Schools, Dr. Leonard Molotsky; Superintendent of Schools, Dr. Arzell Ball.
2. Date and place of Initiation: Spring, 1968.
3. Overall project purpose:
   a. First-hand experience in a variety of habitats, through two day and five day labs and experimental studies in biology program.
   b. Tours and programs available for students from other district schools, K-12.
   c. Enhance positive environmental attitudes and understanding of ecological relationships.
   d. Prepare students to be active citizens in environmental causes.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Setting up environmental labs easily available to all district schools.
   b. Students in biology and life science spend at least 20 hours at all seasons in field studies.
   c. Elementary students have two visits per year in environmental lab.
   d. Students will work to protect environment.
   e. Students will prepare effective communications to convince others to ecological viewpoints.
2. New instructional materials being produced: Yes. Senior high biology field lab investigations being developed by Jerry Murray and Dean Jerrigan. Science and Survival course being revised as Senior High "Environmental Action and Communication" module.

H. MATERIALS PRODUCED:
1. K-6: Not answered.
2. 7-12: Science and Survival course behavioral objectives, tests.
3. Others: Operations Manual, 57 pages, 1968. Five issues of "The Web" newsletter.

I. MATERIALS AVAILABLE FREE:

1. Newsletter sample.
2. Introductory field laboratory studies.
3. Science and Survival course behavioral objectives, schedule, communications examples.

J. MATERIALS PURCHASABLE:

Operations manual - $1.50.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Environmental Action and Communications module for Senior High, to be published by Extramural Independent Study Center, University of Kansas, Lawrence, Kansas.
2. Development of other materials anticipated: University of Kansas materials may include tapes and slide programs.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 1 - Science and Survival, 6 - Environmental Lab.
3. Number of teachers using some of the project materials: 20.
4. Total number of students using project materials: 135 - Science and Survival, 600 - Environmental Lab., 1300 - using some.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Shawnee Mission South High School, 5800 W. 107th, Shawnee Mission, Kansas.
    b. Shawnee Mission East High School, 7500 Mission Road, Shawnee Mission, Kansas. May begin January 1971.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: No.
3. Pre-service training program for teachers desiring to use the materials: Can be arranged.
4. Kinds of teacher preparation programs available: Not as specified.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Only by student evaluation forms, not by statistical tests.
2. Pertinent published research studies: None yet.
3. Unpublished research: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Started Science and Survival course pilot program, fall, 1969. Two semesters - 104 students. 135 signed for 1970-71 school year. Being published by University of Kansas for classroom and correspondence school.

2. Expanded use of environmental laboratory from 800 students to 1200; 10,000 student-hours to 15,000; ten schools to fifty six schools represented among visitors.

P. PLANS FOR THE FUTURE:

Writing more lab units and perhaps publishing them.

A. PROJECT TITLE: COOPERATIVE LEARNING THROUGH ENVIRONMENTAL ACTIVITIES IN NATURE

B. PROJECT DIRECTOR: Ernest H. Kumpf, 9803 Rosehill Road, Shawnee Mission, Kansas 66215. (913)888-3007

C. PROJECT HEADQUARTERS:
1. 9803 Rosehill Road, Shawnee Mission, Kansas 66215.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Two full time, five part time persons employed.

E. PROJECT HISTORY:
1. Principal originators: a few teachers.
2. Date and place of Initiation: August 1, 1971.
3. Overall project purpose: To develop curriculum materials with an environmental emphasis, crossing all curricular areas and all grade levels.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop curriculum materials (multi-discipline).
   b. Promote outdoor learning.
2. New instructional materials being produced: Yes. K-12.

H. MATERIALS PRODUCED: We have not at the present time produced any finished products. Curriculum modules (units) will be available later.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION: Will occur as the project develops.

N. PROJECT EVALUATION: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Continuing development of curriculum modules.

A. PROJECT TITLE: OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Larry L. Bowser, 1124 West Lyman Street, Topeka, Kansas 66608. (913)233-3045

C. PROJECT HEADQUARTERS:
1. 1124 West Lyman Street, Topeka, Kansas 66608.
2. Special facilities or activities available for visitor viewing: On an individually scheduled basis.

D. PRINCIPAL STAFF: 1 person regularly employed, 6 part-time.

E. PROJECT HISTORY:
1. Principal originator: Dr. Frank E. Colaw.
2. Date and place of Initiation: May 1968.
3. Overall purpose:
   a. To permeate outdoor learning experiences, where appropriate, throughout the curriculum.
   b. To make learning about the outdoors a vital factor in all areas of curriculum.
   c. To instill concepts and values in students which will develop their desire to preserve and improve our environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E-3.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
1. K-6: Teachers guide.
2. 7-12: Teachers guide.
3. Others: None.

I. MATERIALS AVAILABLE FREE: Teachers Handbook.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Yes.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 13.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: 130.
4. Total number of students using project materials: 1,800.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: Concepts and methods are being used in all buildings in the district.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 5 days.
    b. Summer Institute: Yes. 3 weeks.
    c. Evening classes: None.
    d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes.
    a. Local School District.
    b. State Department of Public Instruction E.S.E.A. Title III.
2. Pertinent published research studies:

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Continuation of programs with continued evaluation and improvement of the existing programs.

P. PLANS FOR THE FUTURE:
Continuation of present program with continued upgrading and improving of techniques and methods.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION DEMONSTRATION PROJECT, ESEA, TITLE III, SECTION [illegible]

B. PROJECT DIRECTOR: Donald French, 1601 Van Buren, Topeka, Kansas 66612. (913)232-2659

C. PROJECT HEADQUARTERS:
1. 1601 Van Buren, Topeka, Kansas 66612.
2. Special facilities or activities available for visitor viewing: Yes. Environmental field trip sites, curriculum materials for sixth grade, handicapped, and junior and senior high science courses, and field trips which can be observed.

D. PRINCIPAL STAFF: 6 full time persons employed.

E. PROJECT HISTORY:
1. Principal originators: Mr. Stanley Martin, Science Supervisor; Mr. W. I. Green, Director of Special Education; Dr. Quentin D. Groves, Director of Health, Physical Education, Safety and Athletics; Mr. C. L. Kellogg, Physical Education Consultant; members of the Community Council and other technical assistance.
2. Date and place of Initiation: June 28, 1971 federal funding was received. Introduction of the project occurred from early planning stages in April, 1971 through the present time.
3. Overall project purpose: The Environmental Education Project seeks to create in every student an emotional and intellectual appreciation of man's role within his environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Show how man influences the balance of nature in both positive and negative ways.
   b. Develop an understanding of why and how economic considerations influence our interaction with nature.
   c. Instruct and involve students toward actions which will lead to a wiser use and conservation of our natural resources.
   d. Help students determine effective and constructive methods of working for positive environmental actions by all groups.
   e. Develop a knowledge of geological interactions.
2. New instructional materials being produced: Yes. Sixth grade, Special Education, Level 2 and 3, junior and senior high science classes, 4th grade and 7th grade social studies.

H. MATERIALS PRODUCED:
1. K-6: We have developed a unit for sixth grade entitled "Environmental Fundamentals". A 4th grade unit is being developed.
2. 7-12: Environmental units will be developed to integrate with the science classes and 7th grade social studies classes.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: A limited supply of copies of our project and project developed curriculum are available.

J. MATERIALS PURCHASABLE: Curriculum units can be purchased as they are developed.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Audiovisual materials will be developed for all curriculum units. These will include Super 8 films, tapes, slides, transparencies, etc.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 45.
2. Number of teachers having adopted all of the project materials: 150.
3. Number of teachers using some of the project material: 150.
4. Total number of students using project materials: 7,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Highland Park High School, 2424 California, Topeka, Kansas 66605.
    b. Topeka High School, 800 West 10th, Topeka, Kanses 66612.
    c. Topeka West High School, 2001 Fairlawn, Topeka, Kansas 66604.
    d. All Elementary Schools in Topeka, Kansas.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service training program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 10 hours.
    b. Summer Institute: Yes 1 week.
    c. Evening classes: No.
    d. Others: In-service is held after school and the length varies with the teacher and the unit.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
    a. A list of materials used.
    b. An outline of information covered in each session.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: This project has a written accountability factor, including an educational auditor and evaluator. The Institute for the Development of Educational Auditing is doing the evaluation. Curriculum and instructional techniques are evaluated continuously.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. During April, 1971 a Community Council was formed and has met monthly.
2. The project was written during April and May 1971.
3. The project was funded June 29, 1971 by U.S.O.E.
4. Staff for the project was secured by July 10, 1971.
5. The staff had a two week orientation session.
6. The project staff conducted a preservice workshop for 45 target teachers.
7. Curriculum has been developed since July 20, 1971. This work will continue throughout the project.
8. The target date for getting the first curriculum unit in the schools is September 20, 1971.

P. PLANS FOR THE FUTURE:

1. The staff will conduct in-service sessions continuously throughout the year for 4th and 6th grade teachers, junior and senior high science teachers, 7th grade social studies teachers, and teachers of exceptional children.
2. Curriculum will be continuously developed throughout the project.
3. The project staff will conduct at least three demonstration lessons at distant points throughout Kansas.
4. The staff and Community Council will be involved in dissemination activities.

A. PROJECT TITLE: CONSERVATION EDUCATION CENTER - LAND BETWEEN THE LAKES - TVA

B. PROJECT DIRECTOR: John R. Paulk, P.O. Box 27, Golden Pond, Kentucky 42231. (502)924-5602

C. PROJECT HEADQUARTERS:
1. P.O. Box 27, Golden Pond, Kentucky 42231.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 10 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Tennessee Valley Authority.
2. Date and place of Initiation: 1960 - Knoxville, Tennessee.
3. Overall purpose: A demonstration in outdoor recreation and conservation education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To introduce outdoor's conservation education to school systems as good education which is a part of the total curriculum and is intergrated with all areas of the ongoing school program.
   b. To promote an attitude of environmental awareness and develop a sense of responsibility and interest toward our environment and natural resources.
2. New instructional materials being produced: Yes, for teacher training purposes. Teachers in turn produce their own materials to meet their needs.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12: None.
3. Others: Teacher training materials in regard to methods and techniques for teaching in the out-of-doors.

I. MATERIALS AVAILABLE FREE: Contact director.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 25.
2. Number of teachers having adopted all of the project materials: 100.
3. Number of teachers using some of the project materials: 50.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.

6. Names and locations of selected schools where the course is being taught:
   - a. Paducah Public Schools, 10th and Clark, Paducah, Kentucky.
   - b. Clarksville-Montgomery County Schools, Clarksville, Tenn.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   - a. Workshops: Yes. 2-10 days.
   - b. Summer Institute: Yes. In cooperation with Murray State University - 2 weeks.
   - c. Evening classes: Yes. In cooperation with Murray State University - 1 day per week, 3 hours per day.
   - d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

Has the effectiveness of the materials been evaluated: Yes. Only by user.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Provided an off-site assistance in planning for outdoor, conservation or environmental education activities with public schools, colleges and universities.
2. Provide consultant assistance to public schools and institutions, also private foundations.
3. Work closely with other Federal organizations in the area of environmental education.
4. Resident facility fully scheduled since January 1970.

P. PLANS FOR THE FUTURE:

Expanded environmental education program in Tennessee Valley.

A. PROJECT TITLE: CUMBERLAND GAP NATIONAL HISTORICAL PARK NATIONAL ENVIRONMENTAL STUDY AREA

B. PROJECT DIRECTOR: O. William Esch, Environmental Education Specialist, Cumberland Gap National Historical Park, P.O. Box 840, Middlesboro, Kentucky 40965. (606)248-2817

C. PROJECT HEADQUARTERS:
1. Cumberland Gap National Historical Park, P.O. Box 840, Middlesboro, Kentucky 40965.
2. Special facilities or activities available for visitor viewing: Yes. NESA Trail, comfort station, and picnic area.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: National Park Service.
2. Date and place of Initiation: March 1969.
3. Overall project purpose: Environmental awareness.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To provide an outdoor resource area to which teachers may bring their classes and teach their regular curriculum with an environmental flavor.
2. New instructional materials being produced: Some work is being done to assist a local county school system in the development of a curriculum in water.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12: None.
3. Others: A Teacher's Idea Book for Environmental Study by John J. Wagoner printed by Eastern National Park and Monument Association in cooperation with Cumberland Gap National Historical Park. This publication is very general and consequently is useful for all grades.

I. MATERIALS AVAILABLE FREE:
Green Leaf Nature Trail leaflet. This leaflet is an interpretive folder which, though being environmentally oriented, does not relate that closely with the NESA program.

J. MATERIALS PURCHASABLE:
1. Man and His Environment - NEA - $1.75.
2. A Teacher's Idea Book for Environmental Study - John J. Wagoner.
3. Adventure in Environment (set of three books), published by Silver Burdett, Division of General Learning Corporation, Morristown, New Jersey.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
Since October of 1970, six workshops were held to acquaint 97 teachers with the NESA program. As a result, 493 children used the facility. I do not feel that the program has been fully adopted by any of the area teachers.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes. 2-16 hours.
    - b. Summer Institute: No.
    - c. Evening classes: No.
    - d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. A Teacher's Idea Book for Environmental Study by John J. Wagoner, and the Adventures in Environment set of books.
6. Commercial availability of materials: Yes.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By the NEA.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Use of the facility since October, 1970 - 6 teacher workshops attended by 97 teachers.
2. Use of the facility by 493 children.

P. PLANS FOR THE FUTURE:
We have at present 2 NESA trails - Greenleaf and Sugar Run. Our plans are not to develop more facilities but to increase use on those already developed.

A. PROJECT TITLE: WORKSHOP IN LOUISIANA'S NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT EDUCATION

B. PROJECT DIRECTOR: William B. Knipmeyer, Dept. of Social Sciences, Northwestern State University, Natchitoches, La. 71457. (318)357-6195

C. PROJECT HEADQUARTERS:
1. Dept. of Social Sciences, Northwestern State University, Natchitoches, La. 71457.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: One person employed part-time.

E. PROJECT HISTORY:
1. Principal originators: Howard P. McCollom, George Ware.
2. Date and place of Initiation: 1967 Natchitoches, La.
3. Overall project purpose: Improve and supplement teacher training.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Improve and supplement teacher training in the nature of resources, conservation, and environmental problems.

2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: By state agencies.

I. MATERIALS AVAILABLE FREE: Apply to state agencies.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 30.
2. Number of teachers having adopted all of the project materials: 50.
3. Number of teachers using some of the project materials: 50.
4. Total number of students using project materials: Not answered.
5. Totals stated are approximate.
6. Names and locations of schools where the course is being taught: Not answered.

3

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes. 3 weeks.
    b. Summer Institute: Not answered.
    c. Evening classes: Yes. 18 weeks.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By teacher participants.
2. Pertinent published research studies: None

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The project was begun and developed by the North Louisiana Supplementary Education Center which was funded by Title III ESEA. The center employed a full-time staff including directors, supervising teachers, demonstration teachers, and other staff. Materials were produced by the staff and distributed free. These and personnel from state agencies and private industry produced source materials, teacher's guides, lesson plans, etc. The North Louisiana Supplementary Education Center was discontinued in 1970. The project has been continued by Northwestern State University as a single summer workshop without funds or staff. It consists of about 40 representatives from the state agencies of Conservation, Wild Life and Fisheries, Forestry, Soil and private industry.

P. PLANS FOR THE FUTURE:

Continue as a summer workshop only.

A. PROJECT TITLE: BANGOR ENVIRONMENTAL EDUCATION PROJECT

B. PROJECT DIRECTOR: Robert Ervin, 33 Hogan Road, Bangor, Maine 04401. (207)947-7538

C. PROJECT HEADQUARTERS:
1. 183 Harlow Street, Bangor, Maine 04401.
2. Special facilities or activities available for visitor viewing: Not at this time.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: The Bangor Environmental Education Project is a pilot project of the Maine Environmental Education Project which has its base in Yarmouth, Maine. Originally the Bangor School Department was approached by the Yarmouth School District as a possible expansion project, and, after due consideration, Bangor decided to adopt the concept.
2. Date and place of Initiation: September 1971. Bangor, Maine.
3. Overall project purpose: The Bangor Environmental Education Project will produce citizens who are sensitive to the natural environment of which they are guardian and steward, aware of the problems created by their interaction with that environment and also with other men, equipped with the skills to solve these problems, and motivated to seek their solution.

F. PRESENT COMMERCIAL AFFILIATIONS: Not as yet.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To educate the teachers.
   b. To educate the community members.
   c. To educate the students.
   d. To make environmental education an integral part of the school system curriculum.
2. New instructional materials being produced: K-12.

H. MATERIALS PRODUCED: We will be glad to provide this information when we are better organized.

I. MATERIALS AVAILABLE FREE: None as yet.

J. MATERIALS PURCHASABLE: None as yet.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None as yet.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: Not applicable.
2. Number of teachers having adopted all of the project materials: Not applicable.
3. Number of teachers using some of the project materials: Many.

4. Total number of students using project materials: Not applicable.
5. Totals stated: Not answered.
6. Names and locations of schools where the course is being taught:
    a. Fairmount School, 13th Street, Bangor, Maine 04401.
    b. Down East School, Moosehead Blvd., Bangor, Maine 04401.
    c. Dow Lane, Union Street, Bangor, Maine 04401.
    d. Fifth Street Junior High School, 5th Street, Bangor, Maine 04401.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshop: Occasionally.
    b. Summer Institute: No.
    c. Evening classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: Will be evaluated by June 30, 1972.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not applicable.

P. PLANS FOR THE FUTURE: Focused primarily on the problem solving of urban environmental problems.

A. PROJECT TITLE: MAINE'S CONSERVATION SCHOOL

B. PROJECT DIRECTOR: Miss Lorraine L. Stubbs, May-September: Bryant Pond, Maine 04219, telephone Bryant Pont 39 - ring 2. October-April: State Office Building, Room 600, Augusta, Maine 04330. (207)289-2871

C. PROJECT HEADQUARTERS:
1. School is at Bryant Pond, Maine 04219.
2. Special facilities or activities available for visitor viewing: Not set up for tours

D. PRINCIPAL STAFF: Executive Director, full time; Counselors, May, June and September; Staff Faculty, June - August; Visiting Faculty (from State and Federal resource agencies) May - September.

E. PROJECT HISTORY:
1. Principal originators: Mrs. Lillian Waterhouse (deceased), Maine Fish and Game Association, Maine Department of Education, Maine Department of Inland Fisheries and Game.
2. Date and place of Initiation: 1957, Bryant Pond.
3. Overall project purpose: To provide natural resource conservation education to youth groups, to teachers, and to other adults.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E - 3.
2. New instructional materials being produced: Not at present.

H. MATERIALS PRODUCED:
1. K-6: Teaching guides on Forestry, Inland Fish, Wildlife, Soil, Sea and Shore, and Water.
2. 7-12: Not answered.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None at present.
2. Development of other materials anticipated: Recent materials have been produced in cooperation with the Maine Environmental Education Project and are available from M.E.E.P.: Dr. Dean B. Bennett, Yarmouth Elementary School, Yarmouth, Maine 04096.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 450.
2. Number of teachers having adopted all of the project materials: 450.
3. Number of teachers using some of the project materials: Unknown.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught: Not applicable.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: No.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes. Three weeks.
    b. Summer Institute: Yes. Four different three week courses.
    c. Evening classes: No. Except as part of a full day's work schedule.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Each spring and fall - week-long classes for youth groups.
2. Each summer - four three-week college credit courses for teachers.

P. PLANS FOR THE FUTURE: Contemplating year-round program.

A. PROJECT TITLE: SCHOOL SITE MONITORING THAT CAN BE USED AS A BASIS FOR DEVELOPING SCHOOL SITE ENVIRONMENTAL POLICY

B. PROJECT DIRECTOR: John B. Craig Jr., Environmental Consultant, Box 225, Norway, Maine 04268. (207)743-2454

C. PROJECT HEADQUARTERS:
1. Main Street, Norway, Maine 04268.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 full time person employed.

E. PROJECT HISTORY:
1. Principal originator: John Craig - through program of Environmental Education.
2. Date and place of Initiation: September 6, 1971 - Oxford Hills High School.
3. Overall project purpose: Students using the monitored gathered data would have an effective way of formulating their own problems and making their own judgements and revise both in terms of feedback from their experiences. The ultimate information could lead to building a solid school environmental policy.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. To learn techniques of monitoring in order to obtain data within areas of a school site environment.
    b. To become familiar with and develop a skill in the various types of monitoring equipment - build much of it.
    c. Student policies or courses of action would be applied to the real world of the school environment.
    d. To develop attitudes of concern for the biophysical environment - which will involve environmental problem solving.
2. New instructional materials being produced: Yes. K-12.

H. MATERIALS PRODUCED:
1. K-6: K-3 materials are being produced.
2. 7-12: Not answered.
3. Others: Guide Lines for Grade 12.

I. MATERIALS AVAILABLE FREE: Some materials available on request.

J. MATERIALS PURCHASABLE: Guidelines for Monitoring - $3.00.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Film on project.
2. Development of other materials anticipated: Guide Lines - K-12.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 2.

2. Number of teachers having adopted all of the project materials: 60.
3. Number of teachers using some of the project materials: 42.
4. Total number of students using project materials: 256.
5. Totals stated at definite.
6. Names and locations of schools where the course is being taught: Oxford Hills High School, Main Street, South Paris, Maine 04281.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Not answered.
4. Kinds of teacher preparation programs available:
    a. Workshop: **Yes.**
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Working on a personal basis - 8 hours per day.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By the State Department of Education.
2. Pertinent published research studies: Title III Mini-Grant Program - published - State of Maine.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Started project September 1971. Involved to date 256 students, will involve more before end of the year.
2. Doing work in the area of school grounds - aquatic resources, **waste disposal, and air emissions.**
3. Two changes in school policy so far have been banning of herbicides and no use of commercial fertilizer.
4. Other changes are in the process of being made.

P. PLANS FOR THE FUTURE: Include all nine schools in my district.

A. PROJECT TITLE: MAINE ENVIRONMENTAL EDUCATION PROJECT, TITLE III, E.S.E.A.

B. PROJECT DIRECTOR: Dean B. Bennett, 111 West Main Street, Yarmouth, Maine 04096. (207)846-3051

C. PROJECT HEADQUARTERS:

1. Intermediate School, Mc Cartney Street, Yarmouth, Maine 04096.
2. Special facilities or activities available for visitor viewing: Yes. A resource center, some work in school site development.

D. PRINCIPAL STAFF: Three persons regularly employed.

E. PROJECT HISTORY:

1. Principal originators: Dean B. Bennett, Project Director; Frank H. Harrison, Superintendent of Schools.
2. Date and place of Initiation: Fall of 1968, Yarmouth School System.
3. Overall project purpose: To begin to establish in the schools of Maine a K-12 Environmental Education Curriculum, emphasis tailored to and related to each local community.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:

1. Overall objectives of the project:
    a. To establish, in addition to the model program in the Yarmouth area, four coordinator-implemented K-12 demonstration programs in environmental education covering a wide geographic area of Maine.
    b. To assist schools and communities establish committee-implemented K-12 demonstration programs in environmental education covering a wide geographic area of Maine.
    c. To initiate contacts with schools and communities throughout Maine for the purpose of beginning to stimulate a widespread integration of environmental education learning experiences into curriculums which may eventually affect all youth.
    d. To stimulate the development of and assist in the implementation of teacher education programs in environmental education at undergraduate and graduate levels.
    e. To strengthen the concept and contribution of environmental education in Maine and elsewhere through an exchange of information and ideas with related programs and activities.

Student Behavioral Objectives:

f. The student will be able to and will continue to seek to discover and investigate the components and characteristics of his total environment and human demands being made upon it.
g. The student will be able to and will continue to develop criteria to evaluate data related to his total environment and identify opportunities for maintaining and improving his environment.

b. The student will be able to and will continue to participate in carrying out successful environmental problem-solving activities.

2. New instructional materials being produced: Grades K-12.

H. MATERIALS PRODUCED:

1. K-6: Environmental education program organization and operation blueprints for environmental problem-solving K-12. K-6 curriculum guides.

2. 7-12: Blueprints for environmental problem-solving K-12.

3. Others:
   a. Environmental Education in Maine (A Title III ESEA Project).
   b. The Environmental Education Committee.
   c. The Community Environmental Inventory.
   d. Yarmouth, Maine Community Environmental Inventory.
   e. The School Site in Environmental Education.
   f. The Environmental Education Resource Center.

I. MATERIALS AVAILABLE FREE: All of the above except K-6 curriculum guides.

J. MATERIALS PURCHASABLE: K-6 curriculum guides.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Guidelines for the evaluation of student behavioral outcomes.

2. Development of other materials anticipated: Environmental education learning process sheets related to major man-made and natural environmental components.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 7 school systems.

2. Number of teachers having adopted all of the project materials: 50.

3. Number of teachers using some of the project materials: 500.

4. Total number of students using project materials: 10,000.

5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught:
   a. Yarmouth Intermediate School, McCartney Street, Yarmouth, Maine 04096.
   b. Bangor Elementary Schools, Mr. Robert Ervin, Environmental Education Coordinator, 183 Harlow Street, Bangor, Maine 04401.
   c. Oxford Hills Elementary and Secondary Schools, Mr. John B. Craig, Jr., Environmental Education Coordinator, S.A.D. #17, 2 Pine Street, South Paris, Maine 04281.
   d. Kennebunk-Kennebunkport Schools, Mrs. Susan M. Braun, Environmental Education Coordinator, Park Street School, Kennebunk, Maine 04043.
   e. Cape Elizabeth School System, Mr. J. Michael Madden, Environmental Education Coordinator, Middle School, Cape Elizabeth, Maine 04103.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes. $\frac{1}{2}$ - full day.
    b. Summer Institute: Yes. 3 weeks.
    c. Evening classes: Yes. 2 hours.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
    a. Blueprints for environmental problem solving K-12.
    b. Environmental Education Program Organization and Operation.
    c. The Community Environmental Inventory.
    d. The School Site in Environmental Education.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Currently being evaluated by teachers and community groups.
2. Pertinent published research studies: Research in evaluation has been carried out as a Ph.D dissertation at The University of Michigan. An evaluation model for the development of instruments and evaluative techniques has been completed and utilized.
3. Unpublished research: Publication of research in progress.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The project is sponsored by the Yarmouth School Department which initiated its own K-12 Pilot program in 1968. The following year the program became a regional one, financed by and serving the towns of Falmouth, Freeport, Cumberland, North Yarmouth, and Yarmouth. At present this successful program serves as a model and resource center for four other demonstration programs in Maine being established by the project. These programs are currently being initiated in Bangor, Kennebunk-Kennebunkport (SAD #71), Oxford Hills (SAD #17), and Cape Elizabeth.

In addition to these schools systems, which were selected on the basis of location and commitment to finance a program, teachers were selected from the systems. During the past year the four coordinators were trained at the University of Michigan in a Masters Degree program. Recently, the project staff has helped establish a special Masters degree program at the University of Maine, in Orono, in which a Cape Elizabeth trainee is now enrolled.

The project director and a field consultant assist the demonstration programs in the implementation of their programs. In addition, they will be helping other communities establish programs through the organization of environmental education committees and local in-service teacher curriculum workshops utilizing local resources.

Another aspect of the project has been to work with the Conservation Education Foundation of Maine and the University of Maine at Farmington to develop a pilot student teacher training program at Maine's Conservation School in Bryant Pond.

P. PLANS FOR THE FUTURE:

1. Teacher pre-professional and in-service education programs for the fall of 1972, cooperatively financed by the Maine Environmental Education Project, the Regional Environmental Education Project sponsored by the local communities, and the University of Maine at Portland-Gorham through a grant from the Environmental Education Act.
2. Cooperation with the Woolwich, Maine, Conservation Commission under a Ford Foundation Grant to begin a comprehensive community resource inventory in conjunction with a teacher in-service workshop. The inventory will begin to provide a basis for community planning as well as a focus for an environmental education program in the public elementary schools.

A. PROJECT TITLE: REGIONAL ENVIRONMENTAL EDUCATION PROGRAM

B. PROJECT DIRECTOR: Wesley H. Willink, Prince's Point, Yarmouth, Maine 04096. (207)846-3007

C. PROJECT HEADQUARTERS:
1. Yarmouth Intermediate School, Yarmouth, Maine 04096.
2. Special facilities or activities available for visitor viewing: Yes. A Resource Center in the Yarmouth Intermediate School. All welcome at any time to view the on-going program and examples of student projects in the area.

D. PRINCIPAL STAFF: 1 full time coordinator, 1 part time assistant.

E. PROJECT HISTORY:
1. Principal originators: Dean B. Bennett.
2. Date and place of Initiation: September 1968. Yarmouth, Maine.
3. Overall project purpose: To facilitate an emphasis in the curricula of the participating school systems in order that the students will become knowledgeable concerning the total environment and the role of man, able to participate in activities for maintaining and improving the quality of the environment while meeting human needs, and motivated to do so.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To help individuals acquire strong feelings fundamental to developing concern toward and motivation to participate in environmental improvement.
   b. To help individuals acquire basic understandings of their total natural and man-made environment.
   c. To help develop thinking and behavioral skills related to the prevention of environmental degradation, correction of abuses, and the enhancement of existing function and quality of the environment.
2. New instructional materials being produced: Slides and super-8 movies made in the communities for classroom use (primarily produced by interning students from the University of Maine and local volunteers).

H. MATERIALS PRODUCED:
1. K-6:
   a. Teacher's Grade Level Guide - K-6.
   b. Composite Teaching Guide - K-6.
2. 7-12: The Cumberland - North Yarmouth Study (7-8).

3. Others:
Recently developed through Title III:
   - a. Environmental Education in Maine.
   - b. The Environmental Education Committee.
   - c. Environmental Education Program - Organization and Operation.
   - d. The Community Environmental Inventory.
   - e. The School Site in Environmental Education.
   - f. Yarmouth, Maine - Community Environmental Inventory.
   - g. The Environmental Education Resource Center.

I. MATERIALS AVAILABLE FREE:

1. All materials listed under H-3.
2. Organization and Operation - program description.

J. MATERIALS PURCHASABLE:

1. Grade Level Teaching Guide - one for each grade level K-6, $1.00 each.
2. Composite Teaching Guide - composite of all grades K-6, $5.00.

Order copies from Regional Environmental Education Program, Intermediate School, Yarmouth, Maine 04096.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

Materials are developed as needed - no definite projects for coming year.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 15.
2. Number of teachers having adopted all of the project materials: 130.
3. Number of teachers using some of the project materials: 170.
4. Total number of students using project materials: 3,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: This is not a course, but an emphasis.
   - a. Yarmouth Intermediate School, Yarmouth, Maine.
   - b. Morse Street School, Freeport, Maine.
   - c. Mabel I. Wilson School, Cumberland, Maine.
   - d. Plummer School, Falmouth, Maine.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   - a. Workshop: Yes. 1-4 hours.
   - b. Summer Institute: 3 weeks summer of 1971. None in 1972.
   - c. Evening Classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Title III evaluation team.
2. Pertinent published research studies: Possibility of release this coming year.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. 1969-1970 - Program development on a regional basis with emphasis on elementary field trips and presentations for all students K-6. Teacher workshops at beginning of year.
2. 1970-1971 - Emphasis on elementary grade levels, expansion into junior high field trips. Mid-year workshops for "key teachers" K-12, summer session for in-service teachers.
3. 1971-1972 -
   a. A tripling of student environmental improvement activities.
   b. Expansion of serviced to elementary grade levels to include over a doubling of classroom and field trip contacts.
   c. Initiation of two pilot junior high courses focusing on the community environment.
   d. Greater responsibilities and involvement opportunities for community volunteers (52 participated at one time or another).
   e. Development of joint cooperation with the University of Maine to involve greater numbers of pre-service teachers in actual teaching situations.
   f. Selected students participated in a week long camp experience in Bryant Pond, Maine (these were Junior High level).

P. PLANS FOR THE FUTURE:

1. Teacher workshops.
2. Student designed learning activities.
3. Community environmental inventories by various classes.
4. Close ties with the University of Maine at Portland-Gorham to involve pre-service teachers in the program both in the communities and at a field campus in Bryant Pond, Maine.

A. PROJECT TITLE: OUTDOOR SCHOOL

B. PROJECT DIRECTOR: Kendrick Y. Hodgdon, Supervisor of High Schools, Board of Education, 108 Washington Street, Cumberland, Maryland 21502. (301)722-6695

C. PROJECT HEADQUARTERS:
   1. Board of Education, 108 Washington Street, Cumberland, Maryland 21502.
   2. Special facilities or activities available for visitor viewing: Yes. During fall and spring.

D. PRINCIPAL STAFF: 15 regular classroom teachers.

E. PROJECT HISTORY:
   1. Principal originators: Allegany County Bird Club and volunteer teachers. Jack Petry, Assistant Superintendent of Schools; Jack Elliott, Bruce May, Kendrick Y. Hodgdon.
   2. Date and place of Initiation: 1948.
   3. Overall project purpose:
      a. Awareness of environment.
      b. Social skills.
      c. Physical development.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. Learning appreciation of beauty of nature, respect and living with nature.
      b. Living together - social implications.
      c. Learning new games and developing emotionally and physically.
   2. New instructional materials being produced: For 6th grade.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Booklet for students in 6th grade at outdoor school - KEKEWH.
      b. Booklet for teachers - VESPER TIPS.
      c. Materials for teachers, students and parents.
   2. 7-12: None.
   3. Others: None.

I. MATERIALS AVAILABLE FREE:
   1. Letter to parents.
   2. Letter to counselors.
   3. Aims and objectives, schedules, etc.
   4. KEKEWH - self directing outdoor book for 6th graders.
   5. VESPER TIPS - planning of evening programs for teachers.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
    a. 8mm film at outdoor school.
    b. Slides of all outdoor activities.
    c. Tapes of outdoor songs.
  2. Development of other materials anticipated: Guide book for teachers.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: 32.
  2. Number of teachers having adopted all of the project materials: 60.
  3. Number of teachers using some of the project materials: 60.
  4. Total number of students using project materials: 1,200.
  5. Totals stated are definite.
  6. Names and locations of schools where the course is being taught: Outdoor School, Swanton, Maryland. All county schools go to above address to use materials.

M. TEACHER PREPARATION:
  1. Consultative service available for teachers using the materials: Yes.
  2. In-service education program for teachers using the materials: Yes.
  3. Pre-service training program for teachers desiring to use the materials: Yes.
  4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. One hour.
    b. Summer Institute: Yes. Three days.
    c. Evening classes: No.
    d. Others: No.
  5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
  6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
  1. Has the effectiveness of the materials been evaluated: Yes, by students and teachers.
  2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
  1. Special education students now participate in all outdoor school activities.
  2. Outdoor math has been added.
  3. Hunter safety is now taught.
  4. New survival area developed.

P. PLANS FOR THE FUTURE:
  1. Cooking own meal in woods.
  2. Camping - tenting set up.

A. PROJECT TITLE: FREDERICK COUNTY OUTDOOR SCHOOL FOR GRADE 6 AND GRADE 8

B. PROJECT DIRECTOR: David Marple, Board of Education, Frederick, Maryland 21701. (306)662-9200

C. PROJECT HEADQUARTERS:
1. Board of Education, Frederick, Maryland 21701.
2. Special facilities or activities available for visitor viewing: Yes. Camp Greentop and Mar-Lu-Ridge Camp.

D. PRINCIPAL STAFF: One outdoor school principal and five outdoor education teachers are regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Dr. Warren Evans.
2. Date and place of Initiation: Camp Greentop - spring 1957.
3. Overall project purpose: The outdoors has great potential for motivating students. Social possibilities are more important, teacher to student, student to teacher. Direct learnings are more meaningful. Initially the programs emphasized science, the interdisciplinary approach has become more evident through the years.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Involvement in group situations.
   b. Develop self confidence.
   c. Develop awareness of surroundings.
   d. Develop awareness of wonders of nature.
   e. Understand man's place in total environment.
   f. Have students look and see.
   g. Sharpen the use of the senses.
   h. Better use of leisure time.
   i. Develop independence.
   j. Help overcome fears.
   k. Develop responsibility.
   l. Develop camping skills.
   m. Develop good personal grooming and hygiene.
   n. Develop ability to reason.
   o. Understand man's future dilemma.
   p. To give each student a chance to develop increased knowledge and interest in several areas of science, mathematics, history, English, art and music.
2. New instructional materials being produced: Guide for Teachers.

H. MATERIALS PRODUCED:
1. K-6: Grade 6 Outdoor School Guide.
2. 7-12: Grade 8 Outdoor School Guide.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: Guide is available for $2.00.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: All.
2. Number of teachers having adopted all of the project materials: All.
3. Number of teachers using some of the project materials: Not answered.
4. Total number of students using project materials: 1,500 - Grade 6; 900 - Grade 8.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: Course given at camp locations.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes. 1 day.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Resident 5 day Outdoor School Program at Camp Greentop for sixth grade students and their teachers.
2. Resident 3 day Outdoor Education Program for eighth grade students.
3. One day field study at the 8,000 acre Frederick City Watershed on Catoctin Mountain for grades 1-5-8-10.
4. Grade 8 resident 3 day Outdoor Education program made available for 75% of grade 8 students.

P. PLANS FOR THE FUTURE:
1. Expansion of grade 8 program for all students.
2. Resume study on local school grounds in science and other studies by visiting outdoor education teachers.
3. Expanded budget for one day field trips for more resource teachers and transportation costs.
4. Laying nature trails at all schools.
5. Cooperating with State Forester in planting trees on school grounds.

6. Equipping school bus as mobile science lab (microscopes, field guides, etc.), to be moved from school to school.
7. Expanded use of materials such as Audubon tree charts and state topographic and geologic maps for all schools.

A. PROJECT TITLE: WASHINGTON COUNTY OUTDOOR SCHOOL

B. PROJECT DIRECTOR: Paul L. Guptill, Principal, P.O. Box 730, Hagerstown, Maryland 21740. (301)731-2700

C. PROJECT HEADQUARTERS:

   1. P.O. Box 730, Hagerstown, Maryland 21740.
   2. Special facilities or activities available for visitor viewing: During spring and fall only - camp site.

D. PRINCIPAL STAFF: 5 persons regularly employed.

E. PROJECT HISTORY:

   1. Principal originators: Board of Education of Washington County, Maryland.
   2. Date and place of Initiation: 1962.
   3. Overall project purpose: Listed under G.1.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:

   1. Objectives of the project:
      a. To provide opportunity for the student to study the natural sciences through first-hand experiences and observation.
      b. To learn the importance of conservation of natural resources, and methods of practicing conservation.
      c. To begin to understand the ecological balances in nature, and their importance to man.
      d. To learn to be an effective member of the group in which you live. By living in small groups in cabins without an adult, resident students can develop their own leadership and solve their own problems.
      e. To learn to accept responsibility for a share of the work necessary for group living.
      f. To have an opportunity to face and overcome some problems of growing up; homesickness, fear of the woods, placing interest of group above self, etc.
      g. To learn the importance of good health in a setting where it is easy to practice health rules, such as balanced meals with minimum snacks, fresh air and exercise, and adequate rest. The student learns that his health is his responsibility.
      h. To give students an opportunity to see peers and teachers in a new setting.
      i. To give students the opportunity to experience some new freedom and independence, with the related responsibilities that go with citizenship.
      j. To remove the child from commercial, passive recreation, and provide the opportunity to discover and explore "free" recreation available in nature.
   2. New instructional materials being produced: None.

H. MATERIALS PRODUCED:

1. K-6: Guides for use by pupils and teachers only.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 30.
2. Number of teachers having adopted all of the project materials: 60.
3. Number of teachers using some of the project materials: 65.
4. Total number of students using project materials: 125/week.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: It is not a course. It is a one week program for all sixth grade pupils.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: Now in preparation.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

From a small beginning in 1962 of one teacher and one class, the program has expanded to offer one week of school camping to each sixth grade class in the county. The camping program is held in Catoctin Mountain National Park, where the facilities of Camp Misty Mount are rented by the Washington County Board of Education for September, October, May and June. Here one hundred sixth grade students and their classroom teachers and counselors live and work each week under the guidance of the Outdoor School staff. Counselors are obtained through the cooperation of the county high schools, whose guidance departments arrange for a junior or senior boy and girl to work directly with each class of sixth graders. Most of these high school students are interested in future careers in the teaching field or other areas involving work with children. During the winter months, the Outdoor School staff offers a program of field trips and classroom activities related to the out-of-doors for all elementary grades, K through 6.

P. PLANS FOR THE FUTURE:
Year-round program in Outdoor Education.

A. PROJECT TITLE: ENVIRONMENT - A BASIC FOR CURRICULUM

B. PROJECT DIRECTOR: Mr. Ernest Spoerlein, P.O. Box 73, Garrett County Board of Education, Oakland, Maryland 21550. (301)334-9416

C. PROJECT HEADQUARTERS:
1. 4th and Green Streets, Oakland, Maryland 21550.
2. Special facilities or activities available for visitor viewing: Yes. A Spitz A3-P planetarium and an outdoor education resident camp.

D. PRINCIPAL STAFF: 10 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Paul S. Frank Jr., Albert Ringer, Charles F. Strauss.
2. Date and place of Initiation: March 1970 - Oakland, Maryland.
3. Overall purpose: Not answered.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Not answered.
2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
Lessons for field classrooms such as fossil sites, planetarium, forest, streams, lakes, fields, night sky are being developed to be a part of the curriculum K-12 in science and social studies.

I. MATERIALS AVAILABLE FREE:
1. Resource Lessons - A brief description of lessons developed for students at field sites.
2. Resident Camp - A guide for teachers whose students attend the resident camp.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: A television tape series of workers in various occupations. A slide series depicting the various field sites.
2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 17.
2. Number of teachers having adopted all of the project materials: 250.
3. Number of teachers using some of the project materials: 250.
4. Total number of students using project materials: 5,600.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught:
    a. Friendsville School, Friendsville, Maryland.

b. Route 40 School, Star Route, Frostburg, Maryland.
c. Dennett Road School, Dennett Road, Oakland, Maryland 21550.
d. Loch Lynn School, Loch Lynn, Oakland, Maryland.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 10-15 weeks.
   b. Summer Institute: No.
   c. Evening classes: Yes - as part of workshop.
   d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By the Maryland State Department of Education.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Lessons developed for use at field sites.
2. Establishment of resource center for both teachers and students.
3. Institution of a resident camp for 6th graders.
4. We have developed lessons for use with local industries and services.
5. Compiled lessons and audiovisuals to aid teachers in the classroom.
6. We have embarked on new curricula in science K-9, social studies K-6.

P. PLANS FOR THE FUTURE:

Continuation of field lesson development and the search for ways to assist classroom teachers teach their students more effectively.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Joe Howard, Department of Curriculum and Instruction, Montgomery County Public Schools, 850 North Washington Street, Rockville, Maryland 20850.

C. PROJECT HEADQUARTERS:
1. Montgomery County Public Schools, 850 North Washington Street, Rockville, Maryland 20850.
2. Special facilities or activities available for visitor viewing: Not answered.

D. PRINCIPAL STAFF: 1 coordinator, 1 teacher specialist for environmental education and 3 outdoor education teacher specialists.

E. PROJECT HISTORY:
1. Principal originator: Mr. Joe Howard.
2. Date and place of Initiation: 1963, Four Corner's Elementary School, Silver Spring, Maryland.
3. Overall project purpose: The present Division of Environmental Education has grown from the early beginnings of an outdoor education program to a well organized program for over 100 elementary schools. This program has become an important means of providing experiences in the environment for 6th grade students for a one week period. In order to broaden the scope and ensure the continued development of environmental understandings, the Department of Curriculum and Instruction has assigned one person full time responsibility for curriculum development and implementation of environmental education into the existing courses of study. The outdoor education specialists assist in these efforts also when they are not at the outdoor education centers. The designation of the Division of Environmental Education gives added emphasis to the importance of environmental education in Montgomery County.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: The primary objective of the program is to provide opportunities for students to become knowledgeable about, sensitive to and responsible for the quality of the environment.
2. New instructional materials being produced: Yes. Grades 1-12.

H. MATERIALS PRODUCED:
1. K-6: An Environmental Activity Series has been developed for Grades 4-6.
   a. Activities for Studying Streams.
   b. Activities for Studying Wildlife,
   c. Activities for Studying Weather.
   d. Activities for Studying Ponds.
   e. Activities for Studying Rocks and Soil.
   f. Activities for Studying Seasonal Change.
   g. Activities for Studying Megalopolis.
   h. Map and Compass Study.
   i. Outdoor Art Activities.

2. 7-12: A Guide to Environmental Studies K-12. The purpose of this guide is to provide an organizational framework for environmental studies, set forth goals and concepts for environmental education, relate existing curricula with environmental studies, supply reference materials related to specific environmental topics, and finally to provide a model for activities and evaluation.
3. Others: None.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE:
Two videotapes, The School Grounds as a Site for Inquiry and Ponds, have been prepared by the Department of Curriculum and Instruction. Copies of these tapes can be made and can be purchased at cost. These are available from the Department of Education and Technology.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
An environmental newsletter, an environmental activity on marsh studies, and materials on population studies are in preparation for grades K-12.

L. PROJECT IMPLEMENTATION:
Many schools in the county have excellent programs in environmental education. Courses and units as well as one or two day experiences are currently provided. Specific information regarding individual schools can be obtained by contacting the office of the area assistant superintendent in each of the six administrative areas in the school systems:

1. Area I: Mr. Eugene P. Moran, Larchmont Elementary School, 9411 Connecticut Avenue, Kensington, Maryland 20795.
2. Area II: Dr. Ernest W. Snodgrass, Connecticut Park Elementary School, 12518 Greenley Drive, Silver Spring, Maryland 20906.
3. Area III: Dr. Harry Pitt, Tuckerman Elementary School, 8300 Lochinver Lane, Rockville, Maryland 20854.
4. Area IV: Dr. Alan L. Dodd, Forest Knolls Elementary School, 10830 Eastwood Avenue, Silver Spring, Maryland 20901.
5. Area V: Mrs. Helen M. Johnson, Stonegate Elementary School, 14811 Notley Road, Silver Spring, Maryland 20904.
6. Area VI: Dr. Robert S. Shaffner, Whetstone Elementary School, 9601 Centerway Drive, Gaithersburg, Maryland 20760.

M. TEACHER PREPARATION:

1 - 4: Consultant service is available to teachers from members of the Department of Curriculum and Instruction and from area based teacher specialists. These latter are assigned to a given administrative area and they act as resource personnel in a specific discipline. There is a pre-service program for teachers participating in the Outdoor Education Program (i.e., for those who take the students to camp). A one day workshop is available for these teachers. Other workshops are scheduled as needed and as funds are available.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Environmental Education Series is available (see G).

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Expansion of outdoor education program. Over 100 elementary schools now participate.
2. Hiring of a teacher specialist for environmental education to work full time toward the development of a design for environmental education in the county.
3. Preparation of a first draft of a design.
4. Hiring of three outdoor education specialists to coordinate activities at the three outdoor education centers.
5. Opening of a fourth outdoor education center, Spring 1972.
6. Preparation of a Guide to Environmental Studies, Summer 1972.

P. PLANS FOR THE FUTURE:

1. Continue the development of curriculum materials.
2. Plan in-service for teachers for the next school year and the summer of 1973.
3. Montgomery County will open an additional outdoor education center in Montgomery County in the fall, 1973.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION PROGRAM - PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS

B. PROJECT DIRECTORS: James A. Ruckert and Wendell Hosley, 11000 Layton Street, Upper Marlboro, Maryland 20870.
(301)627-4800 Ext. 373

C. PROJECT HEADQUARTERS:
1. Prince George's County Public Schools, 11000 Layton Street, Upper Marlboro, Maryland 20870.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 5 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: J. A. Ruckert, Eunice Burdette, A. Warrinton, Dr. H. Owens.
2. Date and place of initiation: 1958 - Calvert County, Maryland.
3. Overall project purposes:
    a. Using the "out of doors" to teach children.
    b. To teach an awareness of the "out of doors."
    c. To provide instruction in ecology.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. To teach an awareness of the "out of doors" to all fifth and sixth grade children within the school system.
    b. Social skills - living together, etc.
    c. Behavioral objectives for: conservation, pollution control, aesthetic appreciation, recreational usage of environment.
2. New instructional materials being produced: 5th and 6th grades; K-12 overview.

H. MATERIALS PRODUCED:
1. K-6:
    a. Teachers Guide for Outdoor Education.
    b. Booklets -
        1) Ferguson Foundation Program Guide.
        2) Camp Litts (Outdoor Education and Chesapeake Bay).
        3) Pollution unit.
    c. "One Touch of Nature" - 25 minute, 16 mm. film.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE:
Unlimited quantities of the printed materials mentioned in H.1. are available free.

J. MATERIALS PURCHASABLE:

Materials could be sent at cost - price not set yet; contact project director.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Not answered.
2. Development of other materials anticipated: K-12 Curriculum Guide.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 150.
2. Number of teachers having adopted all of the project materials: Teacher training at 80 per year for 13 years plus.
3. Number of teachers using some of the project materials: 500.
4. Total number of students using project materials: 7,500 per year.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. Adelphi Elementary School, Adelphi, Prince George's County, Maryland.
   b. Greenbelt North End School, Greenbelt, Prince George's County, Maryland.
   c. East Riverdale Elementary School, Riverdale, Prince George's County, Maryland.
   d. Calverton Elementary School, Calverton, Prince George's County, Maryland.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 1-3 days.
   b. Summer Institute: Yes.
   c. Evening classes: No.
   d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Program expansion and site development of Environmental Education Center.
2. We are using three camps, Ferguson Farm, Orme, and Camp Litts, plus one summer school site (Camp Crown), for a 12 month program.

3. We work with 5th and 6th graders only in resident camps.
4. We work with K-4 in one day field trips and school campus projects.

P. PLANS FOR THE FUTURE:

Environmental Education Center at Orme now under construction. We hope to house three separate camps on this site in the near future. We intend to expand the total program, with a K-12 emphasis.

A. PROJECT TITLE: SCENIC (A Sequential Curriculum in Ecology and New Instructional Concepts.)

B. PROJECT DIRECTOR: Mrs. Suzanne Chilton, 5 West Street, Auburn, Mass. 01501. (617)832-3239

C. PROJECT HEADQUARTERS:
   1. 5 West Street, Auburn, Mass. 01501.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 1 Project Director, 2 Teachers, 6 Teacher Aids. All are regularly employed.

E. Project History:
   1. Principal originators: Dr. John A. Watters, Dr. Alfred J. Sylvia, Mr. Raymond Gehling, Mr. Paul W. Lemire.
   2. Date and place of Initiation: September 1971 Randall School.
   3. Overall project purpose: To give both teachers and students the background and experience of perceiving environmental problems and to be able to analyze these problems and find solutions to them.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: Same as E-3.
   2. New instructional materials being produced: Yes, grades 4,5,6.

H. MATERIALS PRODUCED: Some for K-6.

I. MATERIALS AVAILABLE FREE: None as yet.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: Not answered.
   2. Development of other materials anticipated: Films and slides on the environment.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 6.
   2. Number of teachers having adopted all of the project materials: 79.
   3. Number of teachers using some of the project materials: 10.
   4. Total number of students using project materials: 2,000.
   5. Totals stated are definite.
   6. Names and locations of schools where the course is being taught:
      a. Randall School, West Street, Auburn, Mass.
      b. Mary D. Stone, Church Street, Auburn, Mass.
      c. Bryn Mawr School, Bryn Mawr Avenue, Auburn, Mass.
      d. Paka Choag School, Paka Choag Street, Auburn, Mass.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available: None.
5. Availability of pre-service teaching materials: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes, by the teachers using them.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: This is a new project as of 1971.

P. PLANS FOR THE FUTURE: To expand on the numbers and kinds of materials for the classroom teacher.

A. PROJECT TITLE: HABITAT INC. - SCHOOL OF ENVIRONMENT

B. PROJECT DIRECTOR: William Phillips, 10 Juniper Road, Belmont, Massachusetts 02178. (617)489-3850

C. PROJECT HEADQUARTERS:
   1. 10 Juniper Road, Belmont, Massachusetts 02178.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 8 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: D. Dickenson Henry, William Phillips.
   2. Date and place of Initiation: September 1971 - Belmont, Mass.
   3. Overall purpose:
      a. An alternative way of learning.
      b. To facilitate significant local improvements in the environment.
      c. An alternative way of financing education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: See E-3.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Primarily technical and implementation reports.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: Modular elements which focus on techniques related to Environmental Problem Solving - tapes, films and written material will be used. This material is now in a formative stage and is not ready for distribution.
   2. Development of other materials anticipated: Case histories in environmental studies.

L. PROJECT IMPLEMENTATION:
   30 students are using all of the materials.

M. TEACHER PREPARATION:
   Workshops for 50 teachers per year plus our own staff development program.

N. PROJECT EVALUATION; Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Formation of non profit corporation devoted to environmental education.
2. Establishment of a pilot environmental school.
3. Establishment of a consultance in environmental problem solving.

P. PLANS FOR THE FUTURE:

1. Expansion of pilot school.
2. Development of materials and workshops for a larger audience.
3. Growth of environmental consultancy in land management, natural resource inventories, and water pollution.
4. Growth of educational consultancy in workshops.

A. PROJECT TITLE: THE NATURAL SCIENCE SERIES

B. PROJECT DIRECTOR: Publisher: Independent School Press, 51 River Street, Wellesley Hills, Mass. 02181.

C. PROJECT HEADQUARTERS:
   1. Francis Wyman Junior High School, Burlington, Mass. 01803.
   2. Special facilities or activities available for visitor viewing: Yes. Classrooms in operation.

D. PRINCIPAL STAFF: Science department personnel - 8.

E. PROJECT HISTORY:
   1. Principal originators: Barbara A. Scott, John Ayres.
   2. Date and place of Initiation: Published 1968, begun 1965.
   3. Overall project purpose: A Junior High Curriculum, integrated earth-life science. To introduce the student to the idea of the regularity and interdependence of nature.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: See E-3.
   2. New instructional materials being produced: Yes.

H. MATERIALS PRODUCED:
   1. K-6: None.
   2. Grade 7: Life I - Lab Manual J "Natural Science" Series.
      Earth I - Lab Manual J "Natural Science" Series.
      Grade 8: Life II - Lab Manual J "Natural Science" Series.
      Earth II- Lab Manual J "Natural Science" Series.
   3. Others: Equipment and materials available for "Earth" Texts, Bird-Songs for "Life" Test.

I. MATERIALS AVAILABLE FREE: Samples from publisher, with teacher's guides.

J. MATERIALS PURCHASABLE: From Publisher.
   1. Life I - $2.25.
   2. Life II - $2.75.
   3. Earth I - $2.50.
   4. Earth II - $2.50.
   5. Materials and tapes.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: For grades 5-6.
   2. Development of other materials anticipated: Possible Water Pollution Unit.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 35-40 nation-wide.

2. Number of teachers having adopted all of the project materials: Not known.

3. Number of teachers using some of the project materials: Not known.

4. Total number of students using project materials: Not known.

5. Totals stated: This is the 3rd year of using published materials, involving 3600 pupils. Before publication approximately 5,000 pupils, in Burlington, Mass.

6. Names and locations of schools where the course is being taught:

   a. Francis Wyman Junior High School, Terrace Hill Avenue, Burlington, Mass. 01803.
   b. Sunset Hill School, Kansas City, Missouri.
   c. Isidore Newman School, New Orleans, Louisiana.
   d. Agnes Irwin School, Rosemont, Pennsylvania.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Available on request.

2. In-service education program for teachers using the materials: Available on request.

3. Pre-service training program for teachers desiring to use the materials: Not answered.

4. Kinds of teacher preparation programs available: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Teachers' Guides.

6. Commercial availability of materials: Publisher.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Only informally. Names of those using it can be supplied on request.

2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:

1. Further lab manuals, water pollution, health.

2. 5th and 6th grade programs.

A. PROJECT TITLE: OUTDOOR EDUCATION PROGRAM

B. PROJECT DIRECTOR: Arnold Clickstein, Headmaster, Charles River Academy, 5 Clinton Street, Cambridge, Massachusetts 02139.
(617)868-5380

C. PROJECT HEADQUARTERS:
1. Charles River Academy, 5 Clinton Street, Cambridge, Mass.
2. Special vacilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 8 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Richard Wainwright, former administrator: Arnold Clickstein, Headmaster.
2. Date and place of Initiation: 1966 - Cambridge.
3. Overall project purpose: To get students involved and interested in the "great outdoors" without the usual classroom pressures by developing experiences which encourage learning through group interaction as well as confrontation with our physical and biological environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To develop an environmental program geared to helping adolescents relate to their environment, ecologically, emotionally, intellectually and physically.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: 60 students are using all of the materials.

M. TEACHER PREPARATION: A consultative service is available for teachers using the materials.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By the staff.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Experiences were provided in two unique settings: the New England wilderness and the New England coast. The program was carried out on weekends, afternoon training sessions, and the last week of school. The understanding of the relationships between living

things and their environment helped to understand relationships between themselves and the world they live in. They also learned techniques related to survival in wilderness areas in various seasons. Search and rescue techniques, mountain climbing techniques, forest fighting techniques, navigational instruction, emergency aid and group living techniques were involved in the program run in the wilderness areas. Sailing, navigational instruction, emergency aid and group living techniques were provided during the Marine Studies part of the project.

P. PLANS FOR THE FUTURE:

To develop a program for student experiences on a dairy farm in Upstate N.Y. and at a Marine station in northern Maine.

A. PROJECT TITLE: FISKE HILL ENVIRONMENTAL STUDY AREA

B. PROJECT DIRECTOR: Park Historian, Minuteman National Historical Park, P.O. Box 160, Concord, Massachusetts 01742. (617)259-9240

C. PROJECT HEADQUARTERS:
1. Minuteman NHP, P.O. Box 160, Concord, Mass. 01742.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 3 persons employed. They do not work full time on the ESA Project as they have many other varied duties within the park.

E. PROJECT HISTORY:
1. Principal originators: National Park Service.
2. Date and place of Initiation: 1968.
3. Overall project purpose: We are trying to make people, especially children, aware of their total environment and the individuals relationship to it. Hopefully, we will help develop attitudes which will gradually take the shape and form of an environmental ethic, an understanding and commitment for the person to act upon all his life.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To expose as many school groups as possible to our ESA and pre-site study materials.
   b. To assist teachers in any way we can in order to make their environmental teaching program more effective.
   c. To aid schools in establishing their own ESA areas.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
1. K-6: FISKE HILL pre-site booklet designed for grades 5 and 6 but flexible to the extent that it can be used for higher and lower grades.
2. 7-12: FISKE HILL pre-site booklet.
3. Others: FISKE HILL Environmental Study Area Teachers Manual.

I. MATERIALS AVAILABLE FREE:
1. Booklets:
   a. Fiske Hill.
   b. Fiske Hill Environmental Study Area.
2. Films available for loan:
   a. Urbanissimo.
   b. A Matter of Time.
   c. Why Man Creates.
   d. The Persistent Seed.
   e. Children and Trees.
   f. Conservation Shorts.

3. Cameras available for loan. 6 Polaroid "By Swinger" Type. Students provide own film.

J. MATERIALS PURCHASABLE:

MAN, EARTH AND CHANGE by Jean Worth. This hardcover book can be purchased for $3.64 from our Eastern National Park and Monument Associations outlets in the park. It is published by Coward - McCann Inc. of New York.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None at present.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 17.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: 81.
4. Total number of students using project materials: 600.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: Not applicable.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 6 hours.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers:
    a. NEED (National Environmental Education Development).
    b. Fiske Hill ESA Teachers' Manual - Adventure in Environment.
    c. Man and His Environment.
6. Commercial availability of materials:
    a. NEED from Silver Burdette Company, Order Processing Department, 250 James Street, Morristown, New Jersey 07960.
    b. Man and His Environment from NEA Publications - Sales Section 34, 1201 Sixteenth Street, N.W., Washington, D.C. 20036.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Teacher questionnaire.
2. Pertinent published research studies: None.
3. Unpublished research: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Basically the program has centered around teacher instruction via the workshop, and student training via the distribution of pre-site study materials and the teacher conducted on-site experience at our ESA. In support of this program we maintain a film lending library, which has served school and other interested groups. We also loan cameras to groups visiting our ESA. In addition to these activities we have conducted off-site programs, such as lectures using slides, to interested school groups.

P. PLANS FOR THE FUTURE:

We hope to expand our ESA services to include use by non-educational groups.

A. PROJECT TITLE: P.T.A.'S PARMENTER ELEMENTARY SCHOOL NATURE TRAIL

B. PROJECT DIRECTOR: Mrs. Joannah Brunelli, P.T.A. Coordinator,
71 Brook Street, Franklin, Massachusetts 02038. (617)528-5229

C. PROJECT HEADQUARTERS:

1. Parmenter Elementary School, Wachusetts Street, Franklin, Massachusetts 02038.
2. Special facilities or activities available for visitor viewing: Yes. The Nature Trail in wooded lot behind school.

D. PRINCIPAL STAFF: 3-12 persons, all volunteers.

E. PROJECT HISTORY:

1. Principal originators: State Department through the school's principal, Mrs. Ruth Masi.
2. Date and place of Initiation: Spring of 1970.
3. Overall project purpose: To acquaint the children with a feeling for nature; construction and not destruction; appreciation of beauty (visual, audio, olfactory, tactile, spiritual); introduction to ecology on an elementary level; small craft project when applicable using nature's resources; and lastly, involvement of mothers in an area directly influencing their own children.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:

1. Objectives of the project:
    a. To bring the children on the trail seasonally (fall and spring).
    b. To introduce one element of the season and its effect on the wooded lot.
    c. To identify by repetition on the trail, various outstanding plants, ecological facts, and awareness of nature.
    d. To follow a progression of growth, fruiting, death, decay, and restoration.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION: Not applicable.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By the teachers.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Fall program of one school involving 240 children.
2. Spring program of three schools involving about 425 students in grades 1-3.
3. Involvement of twelve mothers as trail guides, a baby-sitting service for trail-guide mothers, a central coordinator to supply the baby-sitters for each session, and a coordinator between mothers and teachers.
4. Fall session involves one hour and a half, twice a week per guide.
5. Spring session involves a two hour training session for three sessions, at the end of which the mothers volunteer 1½ to 2 hours once a week for eight weeks, taking the children on the trail. This is done three times a week, but uses mothers only once to keep their enthusiasm at a peak.

P. PLANS FOR THE FUTURE:

1. Using a brook which runs through the wooded lot. To date it has been by-passed.
2. To coordinate school work with "outdoor" classroom, whenever possible.

A. PROJECT TITLE: MASSACHUSETTS AUDUBON SOCIETY EDUCATION PROGRAMS

B. PROJECT DIRECTOR: Charles E. Roth, South Great Road, Lincoln, Massachusetts 01773 (617)259-9500

C. PROJECT HEADQUARTERS:
1. South Great Road, Lincoln, Massachusetts 01773.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 5 section heads, approximately 45 instructors.

E. PROJECT HISTORY:
1. Principal originator: C. Russell Mason.
2. Date and place of Initiation: 1939 - Ipswich, Massachusetts.
3. Overall purpose: To educate people of all ages about the interrelationships between man and the biosphere.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
This is an integrated program consisting of many projects in five major areas.
1. Objectives of the program: Conservation, Education, and Research; see E.3.
2. New instructional materials being produced: Yes. New materials are being developed on many levels on a fairly regular basis.

H. MATERIALS PRODUCED:
1. Curriculum Overview for Developing Environmentally Literate Citizens.
2. Beyond the Classroom - Using the Urban Environment for Instructional Purposes.
3. Curious Naturalist (a monthly magazine; 9 issues yearly).
4. Many teaching sheets.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: Contact project director for catalogue.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the

materials: No.

4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes. Variable, but not less than six sessions.
    - b. Summer Institute: Yes. 4-5 weeks, 7 hours per day.
    - c. Evening classes: Yes. Two hours for ten sessions.
    - d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Contact program director.

P. PLANS FOR THE FUTURE: Contact director. The Massachusetts Audubon annual report runs to ten pages in summary, and the long range plan is thirty pages.

A. PROJECT TITLE: MAHAH FISH AND GAME CLUB - Club program for high school boys and girls.

B. PROJECT DIRECTOR: John E. Roche, Jr., 62 Congress Street, Orange, Massachusetts 01364. (617)544-3140

C. PROJECT HEADQUARTERS:
   1. Mahar Regional School, South Main Street, Orange, Mass. 01364.
   2. Special facilities or activities available for visitor viewing: A school yard pond - that needs improvement.

D. PRINCIPAL STAFF: 1 person.

E. PROJECT HISTORY:
   1. Principal originator: John E. Roche, Jr.
   2. Date and place of Initiation: School's inception in 1958.
   3. Overall project purpose: To teach some conservation - and show need for more education in this field - gun safety, need for conserving natural resources, bridge generation gaps by working and playing together.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. Trap shooting.
      b. Ice fishing.
      c. Forestry work.
      d. Fly fishing.
      e. Pond reclamation.
      f. Committee cooperation.
      g. Show all work that must be done if our way of life is to continue.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION: Not applicable.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: None available.

P. PLANS FOR THE FUTURE: Trap shooting instruction, fly tying instruction, fly fishing instructions, hand loading for rifles and shotgun, field trips to trout hatcheries, Springfield Armory Museum, pheasant rearing pens, banquet for fathers and members.

A. PROJECT TITLE: FOX RUN - NATURAL SCIENCE AREA

B. PROJECT DIRECTOR: Thomas J. MacDonald, Science Coordinator, Esten School, 733 Summer Street, Rockland, Mass. 02370. 878-8336

C. PROJECT HEADQUARTERS:
  1. Hartsuff Park, Hingham Street, Rockland, Mass. 02370.
  2. Special facilities or activities available for visitor viewing:
    a. Natural Science Museum.
    b. Amphitheatre.
    c. Wildflower Area.
    d. Moss and Fern Area.
    e. Herb Area.
    f. Tree Farm.
    g. Two Nature Trails.
    h. Swim Area.
    i. Conservation Building.
    j. Natural Science Programs.

D. PRINCIPAL STAFF: Two volunteers.

E. PROJECT HISTORY:
  1. Principal originators: John J. Rogers, Superintendent of Schools; Thomas J. MacDonald, Science Coordinator.
  2. Date and place of Initiation: 1966 - Rockland.
  3. Overall project purpose: To instruct children and adults about their own environment and ecological background in Rockland.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Completion of a small Natural Science Museum and Zoo Area.
    b. Educational Programs.
  2. New instructional materials being produced: Yes. Grades K-6.

H. MATERIALS PRODUCED: In the process of producing materials.

I. MATERIALS AVAILABLE FREE: Slide Program, Movie Program.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed: Not answered.
  2. Development of other materials anticipated: Booklets.

L. PROJECT IMPLEMENTATION: Using area at the present time only.

M. TEACHER PREPARATION:
  1. Consultative service available for teachers using the materials: No.
  2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Slides only.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
In 1966 a Natural Science Committee was formed to convert a 15 acre piece of school property into an outdoor classroom. Many hours of volunteer work and donations have created the facilities listed under C.2. Over half of the work has been done by the school children themselves and is still being carried on by them. A monthly bulletin called "Timber" is distributed to teachers and other interested persons to keep them informed about the progress and activities at the park as well as important conservation items of interest. During the summer of 1971, a Natural Science Program was held for children from Kindergarten through Grade Six. This program gave students an opportunity to advance their concepts of ecology, animals, rocks, stars, weather, oceans, plants and current conservation practices. In the fall of 1971, a group of sixty disadvantaged students were chosen from grades six and seven to participate in Project SENSE (Student Exposure to Natural Science Environment). After school each day during pleasant weather, children from one of the five elementary schools in town and pupils from the Junior High, work at the park on ecological problems. In the winter months, classes are held indoors at the Junior High School. Three teachers from both academic levels supervise these students and accompany them on Saturday field trips each month.

P. PLANS FOR THE FUTURE: Many ideas but little money.

A. PROJECT TITLE: PROJECT PART-TIME (PUPILS AS RESPONSIBLE TEACHERS TO INCREASE MUTUAL ESTEEM)

B. PROJECT DIRECTOR: Mary F. Toomey, 1615 Commercial Street, E. Weymouth, Massachusetts 02189. (617)335-6331

C. PROJECT HEADQUARTERS:
1. Union Street Elementary School, South Weymouth, Massachusetts 02190.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 4 adults, 6 students regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Mary F. Toomey.
2. Date and place of Initiation: 1965 - Johnson School, North Weymouth.
3. Overall purpose: To utilize qualified high school students as supplementary teachers of special subjects in elementary schools.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To enrich the education of elementary school children, pre-school children, and special class children through the involvement of qualified high school students.
2. New instructional materials being produced: Yes. Grade 4.

H. MATERIALS PRODUCED: Are not yet ready to make any statement concerning this.

I. MATERIALS AVAILABLE FREE: Booklet concerning program is available.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Under study at present.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 3.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: 32.
4. Total number of students using project materials: 1250.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught:
    a. Johnson School, North Weymouth, Mass. 02191.
    b. Nevin School, South Weymouth, Mass. 02190.
    c. Child Care Center, East Weymouth, Mass. 02189.

M. TEACHER PREPARATION:
Consultative service is available for teachers using the materials.

N. PROJECT EVALUATION:
An evaluation was completed by senior students in August 1972.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
This program since 1969 has expanded rapidly. In 1966 subject area included the natural sciences only. Now the entire spectrum of subject areas is included. Environmental education, however, still receives comprehensive coverage.

P. PLANS FOR THE FUTURE:
Continuation and expansion of present program.

A. PROJECT TITLE: ENVIRONMENTAL CENTER FOR OUR SCHOOLS - E.C.O.S.

B. PROJECT DIRECTOR: Clifford A. Phaneuf, 184 Bowdoin Street, Springfield, Massachusetts 01109.

C. PROJECT HEADQUARTERS:
  1. Springfield Public Schools, 195 State Street, Springfield, Mass. 01103.
  2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 16 full time persons employed plus community and park resource people.

E. PROJECT HISTORY:
  1. Principal originators: Mrs. Lorraine B. Ide, Elementary Science Supervisor, Springfield Public Schools.
  2. Date and place of Initiation: Trial sessions Fall of 1970 and Spring of 1971 for Grade 4 students only. Title III funding began July '71 - June '72 for Grades 4,5,and 6.
  3. Overall project purpose: To help Springfield children in the the intermediate grades appreciate the beauties of the forest, pond and field, to have them observe and understand the interdependence and interrelationships of living things in each community, and to see the vital role each member plays in maintaining an ecological balance in that community as will be evidenced by the students cumulative evaluation activities.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To develop environmental awareness in the city child and educate for survival.
    b. To assist teachers in re-defining their roles and using the outdoors as a teaching resource. In-service, pre-service.
    c. To make the curriculum more relevant to student needs and wants.
    d. To expand the learning and teaching environments.
    e. To use a variety of organizational patterns from large groups to individualized learning experiences.
    f. To provide a social and academic mingling of children from all sections of the city.
    g. To develop community and parental involvement in public school programs.
  2. New instructional materials being produced: Yes. Grades 4,5,6.

H. MATERIALS PRODUCED:
  1. K-6:
    a. Environmental Center Curriculum for Grades 4,5,6.
    b. Pre and Post activities for all groups attending E.C.O.S.
    c. Teacher and parent informational material.
    d. Student and teacher evaluations.

2. 7-12: Not answered.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: Materials listed in H are available in limited quantities.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Curriculum for Grades 5 and 6 to be revised summer of '72 from evaluations of first teaching of it Nov. '71 - March '72.
2. Environmental activities tailored to participating schools to be developed summer '72.
3. Grade 3 school environmental activities to be written to prepare children for the E.C.O.S. experience in fourth grade.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 45.
2. Number of teachers having adopted all of the project materials: 900.
3. Number of teachers using some of the project materials: Grade 4 uses only Grade 4 curriculum. Same applies for Grades 5 and 6.
4. Total number of students using project materials: 9,000.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: All children participate in the course at the Environmental Center located at Camp Seco, Forest Park, Springfield, Mass.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshop: 5 two hour sessions for 30 teachers.
   b. Summer Institute: 5 weeks. Six hours per day.
   c. Evening classes: Not answered.
   d. Others: Professional meetings - 2 one hour sessions in the fall.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not at this time.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: In the process. Psychometrics Incorporated, Falmouth, Mass.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1969 - Approved by School Committee for funding a Spring/Fall Grade 4 program for 2400 students to spend 5 days at the Environmental Center.

1971 - May - Title III E.S.E.A. approval for
Grade 4 - 4 days at the Center
Grade 5 - 2 days at the Center plus 1 day in school program
Grade 6 - 1 day at the Center plus 1 day in school program.

P. PLANS FOR THE FUTURE:

1. Tailor environmental activities to the participating schools.
2. Prepare a Grade 3 program to prepare children for the Grade 4 experience.

A. PROJECT TITLE: INTERDEPARTMENTAL DEPARTMENT - ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Joseph P. Freitus, Lincoln-Sudbury Regional High School, Sudbury, Mass. 01776. (617)443-9961

C. PROJECT HEADQUARTERS:
1. Lincoln-Sudbury Regional High School, Sudbury, Mass. 01776.
2. Special facilities or activities available for visitor viewing: This is a resource center, for survival living, only.

D. PRINCIPAL STAFF: 10 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Joseph Freitus.
2. Date and place of Initiation: 1967, Quabbin Regional High School, Barre, Mass.
3. Overall project purpose: To develop a comprehensive environmental education.

F. PRESENT COMMERCIAL AFFILIATIONS: Not answered.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Same as E-3.
2. New instructional materials being produced: Yes. Grades 1-12.

H. MATERIALS PRODUCED:
1. K-6: The Omega Survival Program, for Elementary Schools.
2. 7-12: Environmental Education Course, Ecology Course, Survival Living Course, Environmental Issues, Outward Bound Program called The Nimbus Program, Etc.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE:
Brief descriptions of each of the courses.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
For our resource center, in survival living:
35 mm slides, of 200 edible plants, as referencing work,
Video tapes on "how to", canoes, wilderness shelters, foods, emergency situation, etc.
Our own Survival text book, etc., etc.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 3.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: Not answered.
4. Total number of students using project materials: 500.
5. Totals stated: Not answered.

6. Names and locations of schools where the course is being tuaght: The Fenn School, Concord, Mass.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes.
    b. Summer Institute: Not answered.
    c. Evening classes: Yes.
    d. Others: Adult Evening Education.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not answered.
6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. The State Department of Education.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:

A more intense survival living course, traveling in a wide range of country side.

A. PROJECT TITLE: WALTHAM SUMMER ENVIRONMENTAL SCIENCE PROGRAM

B. PROJECT DIRECTOR: Dr. Alan Aymes, Central Junior High School, 55 School Street, Waltham, Massachusetts 02154. (617)893-8050 Ext. 277.

C. PROJECT HEADQUARTERS:
1. Northeast School, Putney Lane, Waltham, Mass. 02154.
2. Special facilities or activities available for visitor viewing: Yes. During the summer.

D. PRINCIPAL STAFF: 4 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Dr. Alan Aymes, Mrs. Elizabeth French, Mr. Emmanuel Mello.
2. Date and place of Initiation: July 1968. Waltham, Mass.
3. Overall project purpose: Sensitize children to the concept of "Environment" and to some environmental problems.

F. PRESENT COMMERCIAL AFFILIATIONS: No.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Acquaint children with the plant and animal life in a given region.
   b. Allow children to investigate the interdependence of these life forms.
   c. Allow children to investigate the possible adverse effects of man's altering the environment.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: General program description.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Not answered.
2. Development of other materials anticipated: Presently, this is a summer program only. We are working on a K-6 academic year, environmental awareness program.

L. PROJECT IMPLEMENTATION: Summer program only.
1. Number of schools now using entire set of materials: Not applicable.
2. Number of teachers having adopted all of the project materials: Not applicable.
3. Number of teachers using some of the project materials: 4.
4. Total number of students using project materials: 50-60.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: Northeast Elementary School, Putney Lane, Waltham, Mass. 02154.

M. TEACHER PREPARATION: One two day workshop is held prior to the beginning of the summer program.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By the program staff and parents.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The program follows the same general format each summer: two three-week sessions are offered, with a new group of 25-30 students each session. The course meets mornings, five days per week. Most of the day is spent outdoors investigating a particular topic. Pupils then return to the classroom for microscopic analyses, building terraria, etc.

It is largely a pressure-free course. There are no tests or grades of any kind; nor is there any formally assigned homework. Dozens of reference books are available so that pupils can pursue topics of interest to them.. There is usually one field trip to a salt water beach area to examine tidepools.

P. PLANS FOR THE FUTURE:

We are working on a K-6 environmental awareness program for the regular academic year. Essentially the program will involve the investigation of land areas in the vicinity of each school.

A. PROJECT TITLE: A COURSE IN FIELD ECOLOGY

B. PROJECT DIRECTOR: Ronald L. Lavigne, West Road, Petersham, Mass. 01366. (617)724-6645

C. PROJECT HEADQUARTERS:
  1. Grove Street, Winchendon, Mass. 01475.
  2. Special facilities or activities available for visitor viewing: Yes. Complete line of environmental study equipment (approximately $10,000). Field Study Site 1000' from school.

D. PRINCIPAL STAFF: one full time person employed.

E. PROJECT HISTORY:
  1. Principal originator: Ronald L. Lavigne.
  2. Date and place of Initiation: Murdock Junior-Senior High School, September 1968.
  3. Overall project purpose: To establish a regional, teacher training, and elementary student day camp center, aimed at promoting an awareness of the out of doors, and developing a sound understanding of ecological principles.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To offer an outdoor ecology course to high school students.
    b. To operate and staff a summer day camp (ecological) with high school students.
    c. To train teachers in outdoor education techniques using high school students.
  2. New instructional materials being produced: Yes. Presently being used at a senior high level.

H. MATERIALS PRODUCED:
  1. K-6: Not answered.
  2. 7-12:
    a. Course outline (Conservation and Ecology).
    b. Course Field Studies Guide (Field Ecology).
    c. Title III NDEA Project 1971.
  3. Others: Not answered.

I. MATERIALS AVAILABLE FREE:
  Summaries of Project and Course Activities.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: 1.
  2. Number of teachers having adopted all of the project materials: 0.
  3. Number of teachers using some of the project materials: 4.

4. Total number of students using project materials: 500.
5. Totals stated are estimated.
6. Names and locations of schools where course is being taught: Not answered.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Not yet.
2. In-service education program for teachers using the materials: Not yet.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:
1. Institution of Summer Day Camp Program.
2. Institution of Teacher Training Program.

A. PROJECT TITLE: OUTDOOR AND ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: W. Don Hollums, 4175 Andover Road, Bloomfield Hills, Michigan 48013. (313)647-1224

C. PROJECT HEADQUARTERS:
   1. 4175 Andover Road, Bloomfield Hills, Michigan 48013.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Edwin Wickert, Director of Recreation; Steven Velkoff, Science Consultant; Charles Bowers, School Board; Don Hollums, Consultant.
   2. Date and place of Initiation: September 1969.
   3. Overall purpose:
      a. To involve teachers and students in real learning situations in an outdoor environment with emphasis on ecology and natural history, camping and school farming experiences.
      b. Utilization of "turned-off" secondary students as resource aids.
      c. Project serves as excellent liason between school and community.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: See E.3.
   2. New instructional materials being produced: Yes. Elementary grades.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Farmyard Visitiation K-3.
      b. Vegetables in History 4-7.
      c. Tape recording of school site investigations and observations to be used by teachers.
      d. Numerous quickies.
   2. 7-12: Numerous quickies.
   3. Others: An Idea Grows - The Genesis and Development of Outdoor Conservation Education in Bloomfield Hills.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed:
      Master Plan - Outdoor Education-Recreation Areas.
   2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 11.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: 200.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: It isn't a course.
    a. Way Elementary School, 765 W. Long Lake Road, Bloomfield Hills, Michigan.
    b. Traub Elementary School, 1020 E. Square Lake Road, Bloomfield Hills, Michigan.
    c. Hickory Grove Elementary School, 2800 Lalison Road, Bloomfield Hills, Michigan.
    d. Conant Elementary School, 4100 W. Quarton Road, Bloomfield Hills, Michigan.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: No.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Extension class Ed. 882 - Outdoor Education was taught here by Michigan State in 1970. University of Michigan will offer Environmental Education locally.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Nature trails established on several school sites.
2. Approximately 6,000 youngsters involved in school sponsored gardening.
3. Three schools involved in camping - 1969. Seven schools now camping, including one senior high school.
4. In-service programs for all elementary teachers.

P. PLANS FOR THE FUTURE:

1. Continued development of the school farm for youngsters of all ages and as a community education-recreation facility.
2. Continued development of the outdoor laboratory as a learning center and community recreation facility.
3. Additional development of individual school sites for creative teaching and learning.

4. Additional in-service training for teachers.
5. Continued community-school involvement.

A. PROJECT TITLE: EDUCATION AND TRAINING SECTION, INFORMATION AND EDUCATION DIVISION, MICHIGAN DEPARTMENT OF NATURAL RESOURCES

B. PROJECT DIRECTOR: Rod Smith, Supervisor - Education and Training, Department of Natural Resources, Mason Building, Lansing, Michigan 48926. (517)373-1214

C. PROJECT HEADQUARTERS:
1. Mason Building, Lansing, Michigan 48926.
2. Special facilities or activities available for visitor viewing: Yes. Conservation School at Higgins Lake.

D. PRINCIPAL STAFF: Conservation School - 7; Staff and Field - 2. All regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Department of Natural Resources with support of organizations and educators.
2. Date and place of Initiation: Lansing - 1921.
3. Overall purpose: Serve as catalyst to encourage maximum understanding of environmental affairs by all citizens.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. Consultant help to educators.
    b. Liaison with universities, organizations and other agencies.
2. New instructional materials being produced: Not at present. Material produced for general audience is in high demand by schools.

H. MATERIALS PRODUCED:
1. K-6:
    a. Environmental Education for Elementary Grades - Teachers' Manual.
    b. Environmental Education for Intermediate Grades - Teachers' Manual.
2. 7-12: Environmental Education for Junior High Grades - Teachers' Manual.
3. Others: Hundreds of titles of a specific nature.

I. MATERIALS AVAILABLE FREE:
All free except several cost items distributed through a publisher.

J. MATERIALS PURCHASABLE:
1. Michigan Trees Worth Knowing - $2.00.
2. Rocks and Minerals of Michigan - $2.25.
3. Wildlife Sketches - $1.20.
Order from: Hillsdale Educational Publishers, Inc., P.O. Box 245, Hillsdale, Michigan 49242.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Film Loan Catalog.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: Unknown number using our materials, we have no "entire set".
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: Teachers in each of 4,700 buildings.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: There is no "course" in Michigan; however, many schools have well organized environmental education programs.
    a. Ann Arbor Schools, 1220 Wells Street, Ann Arbor, Michigan 48104.
    b. Utica Schools, 52188 Van Dyke, Utica, Michigan 48087.
    c. Bloomfield Hills Schools, 4175 Andover Road, Bloomfield Hills, Michigan 48013.
    d. Grand Rapids Schools, 143 Bostwick N.E., Grand Rapids, Michigan 49502.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: No.
    b. Summer Institute: Yes. Six weeks.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Many titles depending on demand.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Some were included in the study of Dr. Carl Johnson at The Ohio State University.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Conservation Education Reserve.
2. Teachers' Environmental School.
3. Liaison with agencies and institutions.
4. Governor's Task Force to prepare a State Environmental Education Plan.

P. PLANS FOR THE FUTURE:

Continue to serve as a stimulant and catalyst as manpower is at a premium.

A. PROJECT TITLE: A COMMUNITY ACTION MODEL TO REDUCE AQUATIC POLLUTION

B. PROJECT DIRECTOR: Donald E. Maxwell, 1325 Crescent Lake Road, Pontiac, Michigan 48054. (313)674-4241

C. PROJECT HEADQUARTERS:
1. 1325 Crescent Lake Road, Pontiac, Michigan 48054.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 8 persons regularly employed plus possible consultants.

E. PROJECT HISTORY:
1. Principal originators: Mr. Donald E. Maxwell, Mr. Ronald E. Arnold.
2. Date and place of Initiation: September 1971.
3. Overall project purpose:
   a. Develop, test and validate a model for community action to affect environmental changes.
   b. Establish the community supported Drayton Plains Nature Center as a training and resource center for environmental education in the Northern Oakland County area.
   c. Develop and implement a K-9 student activity-centered science curriculum that will improve students' awareness of environmental problems, knowledge of scientific processes and cognitive learning skills, and develop a commitment to modify environmental conditions.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
Objectives - Action Teams: Action teams will be small, task oriented groups and will be typically composed of parents, staff and students from a given school area. The teams will be organized to address a specific aquatic pollution problem in their residential area. The impetus for the formation of the task oriented team in most cases, will be provided by a spinoff of studies conducted in the school science program (for instance, a 4th grade study of pollution level of area lakes). However, it is anticipated that subdivision organizations will also initiate action teams because of a common need - poor swimming and park conditions at the local beach.
   a. Teams will serve their community in the detection of aquatic pollution and its possible sources.
   b. Teams will provide the needed leadership and knowledge through which direct action may be taken to elimenate or reduce aquatic pollution in lakes and streams in this area.
   c. Teams will train other groups to become action teams in dealing with aquatic pollution.
   d. Team members will provide information and direction to those civic minded community organization in their efforts

to combat aquatic pollution.

e. Teams or team members will work with other schools (public and parochial) in working with the water pollution issues of their areas. (Detection of water pollution problems on or near school site).

Objectives - Institutional:

a. The Nature Center will become the environmental resource center in the area.

b. The School District will, through its curriculum changes and teacher in-service program, instill in the students of the District an environmental ethic. This student environmental ethic may be measured by an increase in their (the students') involvement in community projects related to the improvement and maintenance of the environment.

c. The Nature Center, through the coordination of its program offerings in environmental education, will support the process based science programs and the total elementary and secondary education programs of the School District and other public and nonpublic schools in the area.

d. The policies and procedures of other governmental, service and religious organizations will be changed to reflect a concern for immediate action to improve environmental conditions. The Township Planning Board has enthusiastically endorsed this undertaking.

Objectives - Curriculum - Students/Staff:

a. Participating students and teachers will demonstrate the attainment of environmental ethic through increased participation in action groups. .

b. Students will demonstrate a greater environmental concern for the school site, and behavioral changes which are suggestive of good environmental practices.

c. Students will gain ecological concepts - through various experiments and investigations conducted in classroom, school site and Nature Center.

d. The student will develop the conceptual background needed to understand the inter-relationships which exist in their environment. With this understanding they will seek answers to environmental problems which will be in harmony with the environment.

e. The participating staff will exhibit an ecological orientation through a change in teaching behavior, an increase in activity-centered activities, and increased utilization of school site and Nature Center as an outdoor laboratory.

2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: An abstract of project.

J. MATERIALS PURCHASABLE:
A copy of the proposal may be purchased for $4.00.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

A multi-media program or presentation on aquatic pollution with guidelines for use of aquatic pollution detection materials.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 9.
2. Number of teachers having adopted all of the project materials: 36.
3. Number of teachers using some of the project materials: None.
4. Total number of students using project materials: 1,200.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Frank J. Manley School, 2989 VanZandt, Drayton Plains, Michigan 48020.
    b. David Grayson Community School, 3800 W. Walton Blvd., Drayton Plains, Michigan 48020.
    c. Jayno W. Adams School, 3810 Clintonville Road, Pontiac, Michigan 48055.
    d. Henry R. Schoolcraft School, 6400 Maceday Drive, Waterford, Michigan 48095.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 20 hours.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Program ideas in environmental education through Drayton Plains Nature Center.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Summer of 1972: In-service workshop for teachers of grades 1,2,4, & 7.
2. Purchased some of the aquatic testing equipment.
3. Have begun development of supplementary program materials for our elementary program.

P. PLANS FOR THE FUTURE:

Further develop materials for the teacher's use and Community Action Teams in their aquatic activities and for the classroom use in their activities.

A. PROJECT TITLE: DEPARTMENT OF INTERPRETIVE SERVICES, HENNEPIN COUNTY PARK RESERVE DISTRICT

B. PROJECT DIRECTOR: Jack Mauritz, Route 1, Box 32, Maple Plain, Minnesota 55359. (612)473-4693

C. PROJECT HEADQUARTERS:
1. Nature Centers (3) of the Hennepin County Park Reserve District.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 11 persons employed full-time, 1 part-time.

E. PROJECT HISTORY:
1. Principal originators: Began as single Nature Center - under auspices of Metro Nature Centers - now three centers and program "adopted" by Hennepin County Park Reserve District.
2. Date and place of Initiation: Spring 1968.
3. Overall purpose: Programming in two phases - educational and recreational to function in Interpretive Services for Henn. Co. Parks.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. Educational - to provide programs of value in environmental education curricula of surrounding schools, (Public and Private).
    b. Recreational - to provide programs of significant recreational value for citizens of the metropolitan (twin cities) area.
2. New instructional materials being produced: Yes. Primarily as support materials for our educational programs - where emphasis has been on upper elementary educational levels. They are in current use at other levels however (often through application by other agencies).

H. MATERIALS PRODUCED:
1. K-6: "Teacher's Packet" - materials include programmed learner and activity suggestions plus "activities" which vary with programs we develop for each class.
2. 7-12: None.
3. Others: Some special interest materials for the general public.

I. MATERIALS AVAILABLE FREE: Single complimentary copies to interpretive, educational, or recreational agencies - all other materials have a cost.

J. MATERIALS PURCHASABLE:
1. Teachers Packet - $1.00.
2. "Working with Children in the Outdoors" - $.25.

3. "Nature Oriented Games, Crafts and Activities" - $.50.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 27.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: 1,000.
4. Total number of students using project materials: 30,000.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: Programs are taught at the Nature Center.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available.
   a. Workshops: Yes. 1 day to 1 week.
   b. Summer Institute: 1 week.
   c. Evening classes: Yes. Six 2 hour sessions.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Provided programs (in and out of nature centers) for approximately 75,000 students.
2. Opened second nature center (Hyland Lake Park Reservation).
3. Expanded services into two other Park Reserves.

P. PLANS FOR THE FUTURE:
Expansion of services and materials as needs become evident and funding available.

A. PROJECT TITLE: NORTHEASTERN MINNESOTA ENVIRONMENTAL LEARNING CENTER

B. PROJECT DIRECTOR: Gerald C. Foldenauer, Box 191-A, Isabella, Minnesota 55607.

C. PROJECT HEADQUARTERS:
  1. Box 191-A, Isabella, Minnesota 55607.
  2. Special facilities or activities available for visitor viewing: Yes. Any group can participate either in curricular or recreational activities.

D. PRINCIPAL STAFF: 8 persons regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: Dr. Gale G. Lennon, Superintendent, Cook County Public Schools; Mr. Gerald C. Foldenauer, Director.
  2. Date and place of Initiation: July 1, 1972 - Northeastern Minnesota Environmental Learning Center, Isabella, Minnesota.
  3. Overall purpose: To provide students with an awareness of environmental need through comparative analysis.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To create an awareness of environmental needs.
    b. To institute a curriculum through comparative analysis.
    c. To provide a facility for extended stays by students and faculty.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE:
  1. Project brochure.
  2. Duluth's guide to a successful environmental experience.
  3. Listings of available resources.

J. MATERIALS PURCHASABLE: All materials are available, free of cost.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
    a. A 30 minute slide tape presentation.
    b. Video tape recordings for curriculum instruction.
  2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: 16.
  2. Number of teachers having adopted all of the project materials: Not answered.
  3. Number of teachers using some of the project materials: 61.
  4. Total number of students using project materials: 3,369.
  5. Totals stated are definite.

6. Names and locations of selected schools where the course is being taught:
    a. Hermantown School, 4190 Ugstad Road, Duluth, Minnesota 55811.
    b. Two Harbors School, Two Harbors, Minnesota 55616.
    c. Cook County Schools, Independent School District 166, Grand Marais, Minnesota 55604.
    d. Duluth Public Schools, 226 North 1st Avenue E., Duluth, Minnesota 55802.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 2 days.
    b. Summer Institute: Being planned.
    c. Evening classes: No.
    d. Others: Professional growth credits will be offered for teachers in a summer school setting.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By Mr. Steven Lundin, Educational Management Services, Inc., 4930 West 77th Street, Minneapolis, Minnesota 55435.

2. Pertinent published research studies: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Project inception date: July 1, 1971.
2. First students at Center: September 27, 1971.
3. Nine in-service sessions for teachers.
4. Summer school programs for schools outside of cooperative area: May, June, July of 1972.

P. PLANS FOR THE FUTURE:

1. Teacher preparation courses with college credit offered.
2. Student teaching experience for college students.
3. Accredited classes for high school students.
4. Summer environmental program for non-ambulatory students.

A. PROJECT TITLE: MINNESOTA ENVIRONMENTAL SCIENCES FOUNDATION, INC.

B. PROJECT DIRECTOR: Richard J. Myshak, Executive Director, 5400 Glenwood Avenue, Minneapolis, Minnesota 55422.
(612)544-8971

C. PROJECT HEADQUARTERS:
1. 5400 Glenwood Avenue, Minneapolis, Minnesota 55422.
2. Special facilities or activities available for visitor viewing: Yes. Classroom, laboratory, library, photo laboratory, and curriculum units.

D. PRINCIPAL STAFF: 28 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Golden Valley Public Schools under grant ESEA Title III.
2. Date and place of Initiation: July 1, 1967.
3. Overall purpose: To improve the quantity and quality of education pertaining to man's relation to his environment.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes. National Wildlife Federation.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop and test model staff development programs in the environmental sciences for elementary and secondary school teachers and administrators, college instructors, youth and adult organization leaders.
   b. To develop and test inquiry-oriented, interdisciplinary, instructional materials and programs based upon socio-ecological interrelationships.
   c. To assist schools and other agencies to identify, develop, and utilize available natural areas and other community resources as environmental laboratories, i.e., the everywhere classroom.
2. New instructional materials being produced: Yes. K-adult.

H. MATERIALS PRODUCED:
Lessons and teacher resource materials available from project and/or National Wildlife Federation.

I. MATERIALS AVAILABLE FREE: Newsletter, ECOLOG and other handouts.

J. MATERIALS PURCHASABLE:
Lessons and teacher resource materials available from project and/or National Wildlife Federation.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: School Site Instructional video tape.
2. Development of other materials anticipated: Yes. New materials in career-environmental education and community environmental education.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 2,000.
2. Number of teachers having adopted all of the project materials: 7,500.
3. Number of teachers using some of the project materials: 22,500.
4. Total number of students using project materials: 60,000.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught:
   a. Independent School District 281, 4148 Winnetka Avenue North, Minneapolis, Mn. 55427.
   b. Independent School District 275, 5400 Glenwood Avenue, Minneapolis, Mn. 55422.
   c. Minneapolis Public Schools, 807 N.E. Broadway, Minneapolis, Mn. 55413.
   d. Owatonna Public Schools, Owatonna, Mn.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. From 1 day to 5 weeks.
   b. Summer Institute: 5-6 weeks.
   c. Evening classes: Yes. 2 hours for ten weeks.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: Yes. National Wildlife Federation and Minnesota Environmental Sciences Foundation, Inc.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes.
   a. Internal.
   b. Sierra Planning/Research Associates.
   c. Educational Research Information Agency - ERIC.
   d. Educational Planning and Programming Services, Inc.
   e. Educational Management Services, Inc.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Continued emphasis upon curriculum development, in-service training programs, and outdoor laboratory development. Also, we have implemented a Vocational Education Project and Community Environmental Studies Project.

P. PLANS FOR THE FUTURE:

Answered in O.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION AND RECREATION

B. PROJECT DIRECTOR: Robert M. Nixon, Long Lake Conservation Center, Palisade, Minnesota 56469. (218)768-3873

C. PROJECT HEADQUARTERS:
1. Long Lake Conservation Center, Palisade, Minn. 56469.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1-15 persons employed on a part and full-time basis.

E. PROJECT HISTORY:
1. Principal originators: Jim Marcum, Robert Burwell, Kern Ridlington.
2. Date and place of Initiation: 1961.
3. Overall project purpose: Environmental education for people of Minnesota with an emphasis on youth.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes. Used for brochures and posters.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Provide a place with staff and volunteers for people to come to study environmental problems while enjoying said environment through outdoor activities.
2. New instructional materials being produced: Yes. All grade levels.

H. MATERIALS PRODUCED:
Basically our materials consist of outdoor workshops and activities involving trained men in the many varied fields of conservation.

I. MATERIALS AVAILABLE FREE: Not possible.

J. MATERIALS PURCHASABLE: Not applicable.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not Applicable.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION:
A two week workshop is available for teachers. We also run six two-week summer sessions for youths.

N. PROJECT EVALUATION:
Self evaluation as well as evaluation by people who have completed the course.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. 4 or 5 summer sessions for youth per year.
2. 1 summer session for teachers per year.

P. PLANS FOR THE FUTURE:

Weekend and possibly week-long workshops for all ages throughout the year.

A. PROJECT TITLE: ENVIRONMENTAL LEARNING CENTER, INC.

B. PROJECT DIRECTOR: Bruce Ause, R.R. 1, Red Wing, Minnesota, 55066. (612)388-4849

C. PROJECT HEADQUARTERS:
   1. Friedrich City Center, Red Wing, Minnesota, 55066.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Full-time Director, Half-time Secretary.

E. PROJECT HISTORY:
   1. Principal originators: A task force of nine interested citizens in the Red Wing community.
   2. Date and place of Initiation: June 1, 1970 - Red Wing, Minn.
   3. Overall project purpose:
      a. To provide learning experiences that will result in a better understanding of man's relationship with his environment and will contribute to the maintenance of environmental quality.
      b. To maximize the educational use of community resources by unifying the efforts of individuals and organizations committed to conservation and environmental studies.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. Provide multiple opportunities to acquaint school students and citizens with the study of their evnironment in a natural setting.
      b. Plan outdoor education experience for local citizens.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: A series of slides for each educational activity.
   2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: None.
   2. Number of teachers having adopted all of the project materials: None.
   3. Number of teachers using some of the project materials: 20.
   4. Total number of students using project materials: 300.
   5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught: Red Wing Public Schools #256, Red Wing, Minnesota 55066.

M. TEACHER PREPARATION:
Consultative service is available for teachers using the materials.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
The initiative to form a nature center by several citizens came in February, 1970. Awareness of Red Wing's natural resources for outdoor classroom study crystalized much earlier, however. The Red Wing Art Association tested community interest in the 1960's with several outdoor programs of NATURE and ART. In 1969, the Red Wing Planning Commission invited Professor John Borchert, head of the Department of Geography, University of Minnesota, to present an analysis to the public of Red Wing's economic future as it relates to our natural resources. These preliminary studies convinced citizens. An advisory committee of nine men and women pledged their aid in launching a center to be financed initially by the Red Wing Shoe Foundation. The director, Bruce Ause, arrived July 1, 1970. On December 9, 1970, the Red Wing Environmental Learning Center was incorporated as a non-profit corporation. Programs sponsored by the E.L.C. are for the most part experimental. From such experimentation, it is hopeful that the programs holding the most interest and serving the citizens of Red Wing can be found. These programs include: a waterfowl identification course, environmental information seminars, "Time For Life" Series, nature film series, school programs and youth programs.

P. PLANS FOR THE FUTURE:
Three Year Program:
1. Outdoor oriented activities.
2. If it is an indoor activity, it will be related to an outdoor experience.
3. Each year the activities will be new and different enabling a person to start at any given time.
4. At the end of three years, the sequence of programs may be repeated.
5. Following three years of experience, the participant might:
    a. Be individually involved in some facet of environmental enjoyment or learning.
    b. Be a trained leader for other community programs.
    c. Be a valuable assistant instructor for the E.L.C. It is felt that this would be an opportune time to expand our services.

A. PROJECT TITLE: WOOD LAKE NATURE CENTER

B. PROJECT DIRECTOR: Donald A. Fondrick, Manager Naturalist, Wood Lake Nature Center, 735 Lake Shore Drive, Richfield, Minnesota 55423. (612)861-4507

C. PROJECT HEADQUARTERS:
1. 735 Lake Shore Drive, Richfield, Minnesota 55423.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 5 persons employed full-time and 4 part-time.

E. PROJECT HISTORY:
1. Principal originators: Mayor and city council of Richfield and Brauer and Associates, Site Planners.
2. Date and place of Initiation: Grand opening of nature center was May 23, 1971.
3. Overall project purpose: To provide an area where people could cultivate an interest in nature either by participating in programmed activities or simply wandering and exploring on their own, and to preserve the marsh habitat and wildlife.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Educational - to provide an area for outdoor education through self discovery for all age levels either through naturalist guided activities or activities planned by the group at its own discretion.
   b. Recreational - hiking, snowshoeing, cross country skiing, wildlife photography and other activities compatible to the area.
2. New instructional materials being produced: Yes. All age levels, pre-schoolers to adults.

H. MATERIALS PRODUCED:
These materials are summaries of 1½ hour activities (field studies) that can be modified successfully for all age groups.
1. Grab bags and touch and see tables - Pre-schoolers.
2. Predator-prey relationships.
3. Animal homes.
4. Ice ecology.
5. Water ecology.
6. Pre-schooler nature art activities (shapes and birds).
7. Snow quality and animal tracking.
8. Radio telemetry.
9. Animal territories.
10. Weather unit.
11. General brochure.
12. Blind trail.

I. MATERIALS AVAILABLE FREE:
One-page summaries of all activities listed under H are available free if asked for by the above titles.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: A self-guided nature trail for blind persons or sighted person, blindfolded. Trail utilized tape and numbered stations along a guiderope. At present only a summer tape is available for use at our site.
2. Development of other materials anticipated: Self-guiding packet for general public for use here, consisting of a tape recording and small brochure of photographs which could be checked out by persons visiting the center.

L. PROJECT IMPLEMENTATION:
Our materials are not developed to serve as a curriculum for schools using our area, but only as 1½ hour activities which present a basic concept to students. At present most activities are naturalist guided, but it is hoped that as teachers become acquainted with the area, they will undertake the guidance of their classes using our materials or their own.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 2 hours - conducted by the Richfield School System, with our staff cooperation.
   b. Summer Institute: Yes. 1 week - conducted by the University of Minnesota, with our staff cooperation.
   c. Evening classes: Yes.- conducted by instructors teaching nature-related subjects.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Same units listed under H.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Development of:
1. Museum, touch and see tables.
2. Trail for the blind.
3. Education units for all seasons.
4. Nature trail system.
5. Self-guided brochure.

6. Teacher education.
7. Developing replica of living native prairie.
8. Basic wildlife management in area (establishing Giant Canada Goose flock, planting of food shrubs, etc).
9. Family film series.
10. Nature-oriented classes (astronomy, wildlife photography, taxidermy, nature art classes).
11. Kiddie corner in museum for pre-schoolers.

P. PLANS FOR THE FUTURE:

Expansion of programs already initiated with emphasis on more educational units and activities for all types of groups and age levels.

A. PROJECT TITLE: NATURAL RESOURCE EDUCATION

B. PROJECT DIRECTOR: Bernard A. Fashingbauer, Science Museum of Minnesota, 30 E. Tenth Street, St. Paul, Minn. 55101 (612)222-6303

C. PROJECT HEADQUARTERS:
1. Marine on St. Croix, R.R. 1, Washington County, Minn. 55047.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: Director - naturalist, Teacher - naturalist, 75 volunteer trail guides. Director and teacher are full-time.

E. PROJECT HISTORY:
1. Principal originators: The Science Museum, St. Paul; Amherst H. Wilder Foundation, St. Paul; The Junior League of St. Paul, Inc.
2. Date and place of Initiation: June 1964 - St. Paul.
3. Overall project purpose: Quality Natural Resource Education aimed at instilling in our citizenry a concern for our Natural Resources which will eventually prompt demands for sound Natural Resource legislation at all levels.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes. Publishing only.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Help provide facilities for the various segments of our community whereby environmental education will retain the prominence it warrants.
2. New instructional materials being produced: Yes. Mimeo materials for local distribution. Primarily grades 3-8.

H. MATERIALS PRODUCED:
1. K-6: Sporadic pre-visit mimeo materials to aid teacher in preparing the class for experiences at the Nature Center.
2. 7-12: Same as 1.
3. Others: Information to enable our volunteer trail guides to adequately interpret significant environmental aspects along our nature trails.

I. MATERIALS AVAILABLE FREE:
Everything thus far has been designed for use by those visiting our Nature Center and is not suitable for more widespread distribution.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: Illustrated trail-guide booklets.

L. PROJECT IMPLEMENTATION: Not applicable - as we have made only minor sporadic attempts at distribution of such material and we have no means of evaluating such use.

M. TEACHER PREPARATION:
We occasionally conduct an in-service workshop for various groups of teachers and we have 3 seasonal, in-service training sessions for our volunteer trail guides.

N. PROJECT EVALUATION: No. We have relied on the overwhelming response to our programs as indicative of their merit.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. School Term. Grades 3-8. Topics change seasonally.
   Monday - Friday: Half-day sessions consisting of illustrated discussions and guided trail hike. (Snowshoe treks in winter).
   Saturday: Similar activities for organizations such as scouts, campfire girls, 4-H, YMCA, church groups, etc.
   Sunday: Similar activities for family groups and general public.
2. Summer.
   8 week session for young people in grades 5-12. Each course consists of five consecutive days of instruction in a specific area of natural history. Students may pursue more than one topic. There are also half-day sessions for day campers during this 8-week period.

P. PLANS FOR THE FUTURE:

1. Quality in-service training sessions for trail guides and elementary grade teachers.
2. Expanded nature education program for adult segments of our community.
3. Addition of "all-day" nature education programs to our current half-day programs.

A. PROJECT TITLE: MINNESOTA ENVIRONMENTAL EDUCATION PROGRAM

B. PROJECT DIRECTOR: John C. Miller, 644 Capitol Square Building, St. Paul, Minnesota 55101. (612)221-6947

C. PROJECT HEADQUARTERS:
  1. 644 Capitol Square Building, St. Paul, Minnesota 55101.
  2. Special facilities or activities available for visitor viewing: Yes. Curriculum materials, school district programs, outdoor sites.

D. PRINCIPAL STAFF: 3 persons regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: Minnesota Environmental Education Steering Committee.
  2. Date and place of Initiation: January 1, 1970, Minneapolis.
  3. Overall purpose: To develop a comprehensive K-12 integrated, interdisciplinary curriculum and to implement it state-wide. (Curriculum is to serve as a model - hopefully, school districts would expand upon the program and include personalized materials).

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To research and develop environmental education curriculum materials for elementary and secondary schools.
    b. To implement environmental education curriculum materials in the elementary and secondary schools statewide.
  2. New instructional materials being produced: Yes. K-12.

H. MATERIALS PRODUCED:
  1. 30 instructional units and bibliography.
  2. "Learning to Live" - Environmental Education Workshop activities.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
  30 instructional units and bibliography - $99.00. Available from the Minnesota Department of Administration, Documents Section, Room 140 Centennial Building, St. Paul, Minnesota 55155.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
    a. Ancillary instructional materials (filmstrips currently).
    b. TV tapes.
  2. Development of other materials anticipated:
    a. Films, tapes, etc.
    b. Site utilization bandbooks.
    c. Elementary Environmental Education Magazine.

L. PROJECT IMPLEMENTATION:

Pilot - 50 school districts, 500 teachers and 7-10,000 students are now using our materials. Schools where the course is being taught include:

1. Richfield School, Richfield, Minn.
2. Robbinsdale School, Robbinsdale, Minn.
3. Alexandria School, Alexandria, Minn.
4. Roseau School, Roseau, Minn.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 3-5 days.
    b. Summer Institute: No.
    c. Evening classes: Yes. 2-5 hours/20 weeks.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes.
    a. 100+ pilot K-12 teachers representing 12 Minnesota school districts.
    b. 25 cooperating K-12 teachers.
2. Pertinent published research studies: None yet.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Passage of environmental legislation 1969.
2. Passage of environmental legislation enabling funding 1971.
3. Establishment of Environmental Education Steering Committee 1969 (Education and Department of Natural Resources).
4. Development and implementation of Pilot Project.
5. Creation of Minnesota Environmental Education Council.
6. Appointment of Minnesota Environmental Education Council Executive Secretary.
7. Revision of K-6 Pilot Program Curriculum Units.
8. Development of new K-6 Curriculum Units.
9. Implementation of K-6 Environmental Education Curriculum Materials - Delivery System.
10. Three summer leadership training programs held:
    a. Bald Eagle Center - August 6-9, 1972.
    b. Flandrau State Park - August 13-16, 1972.
    c. Sibley State Park - August 20-23, 1972.

P. PLANS FOR THE FUTURE:

1. Complete evaluation of pilot project.
2. Revision of curriculum materials.
3. Development of curriculum materials.

4. Implementation (regionally) of Environmental Education curriculum materials (in-service).
5. Implementation of Environmental Education curriculum materials in higher education (pre-service).
6. Phase III - Secondary Program is scheduled to begin July 1973. It will include:
    a. Revision of 7-12 Pilot Program Curriculum Units.
    b. Development of new 7-12 Curriculum Units.
    c. Implementation of 7-12 Environmental Education Curriculum Materials - Delivery System.

A. PROJECT TITLE: ROCKWOODS RESERVATION

B. PROJECT DIRECTOR: Randall O. Herberg, Route 1, Box 1599, Glencoe, Missouri 63038. (314)273-5436

C. PROJECT HEADQUARTERS:
   1. Glencoe Road, Glencoe, Missouri 63038.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 3 persons employed full-time, 3 temporary.

E. PROJECT HISTORY:
   1. Principal originators: A. P. Greensfelder and other St. Louis businessmen.
   2. Date and place of Initiation: 1938 - Rockwoods Reservation.
   3. Overall project purpose: Conservation education and demonstration, outdoor recreation.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To give people of the St. Louis area an opportunity to learn about the Missouri Department of Conservation and its programs.
      b. To give these people an outdoor recreation experience.
      c. To provide a place for learning about nature in the out-of-doors.
   2. New instructional materials being produced: Yes. K-college.

H. MATERIALS PRODUCED:
   Materials are mostly in the form of interpretive trails and self-guiding lectures. No publications as such are produced.

I. MATERIALS AVAILABLE FREE: Contact project headquarters.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed:
      a. Fire prevention slide/tape series.
      b. Slide/tape show about Rockwoods.
   2. Development of other materials anticipated: New 1.65 mile interpretive trail.

L. PROJECT IMPLEMENTATION:
   We do not know how many schools or teachers are using our facilities or materials.

M. TEACHER PREPARATION:
   A 3 hour workshop is available.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
   1. Visitors numbered between 200,000 and 250,000 annually.
   2. A few new exhibits have been added or updated in the Education Center.
   3. About 35,000 children in organized groups visit annually.

P. PLANS FOR THE FUTURE:
   Relocate three existing interpretive trails. Add and update more of the inside and outside exhibits.

A. PROJECT TITLE: FIELD ECOLOGY (ESTABLISHMENT OF AN ECOLOGICAL MUSEUM)

B. PROJECT DIRECTOR: Wilbur J. Gunier, 31st and Hwy. Blvd., Higginsville, Missouri 64037. (816)584-3661

C. PROJECT HEADQUARTERS:
   1. Lafayette County School District C-1 High School, 31st and Hwy. Blvd., Higginsville, Missouri 64037.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Wilbur J. Gunier, Project Director; James H. Stoner, Coordinator.
   2. Date and place of Initiation: 1967.
   3. Overall project purpose:
      a. To provide a new approach to the teaching of science, especially in the field of ecology.
      b. To enrich and expand the science of all students.
      c. To provide instruction in areas of ecology that is not normally covered in high school.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT HISTORY:
   1. Objectives of the project:
      a. To increase pupil achievement in the sciences.
      b. To enrich and expand the science interest of students.
      c. To provide instruction in areas not normally covered.
      d. To allow students to discover and develop scientific procedures.
      e. To reveal new and worthwhile information in the field of ecology.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: None.
   2. Development of other materials anticipated: I hope to develop an Ecological Handbook.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Mid-continent Regional Educational Laboratory: Dr. Larry Havliecek, Research Specialist of McRel; Dr. Frank Wiley, ASC Coordinator of McRel.

2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

This ecology project has developed course and lecture sessions by the project director in the following fields: pond communities, deciduous forest biome, fresh water streams, grassland communities, ecology and its relation to man.

P. PLANS FOR THE FUTURE:

1. Consultant service for teachers and future project development in other institutions.

2. In-service training for teachers.

3. Workshop training.

4. Develop similar ecology project on the two or four year college level.

A. PROJECT TITLE: OUTDOOR SCHOOL IN CONSERVATION

B. PROJECT DIRECTOR: Donald A. King, Box 161, Alberton, Montana 59820. (406)722-4413

C. PROJECT HEADQUARTERS:
1. Box 161, Alberton, Montana 59820.
2. Special facilities or activities available for visitor viewing: Yes. Buildings, Handbook.

D. PRINCIPAL STAFF: 8 persons employed part-time.

E. PROJECT HISTORY:
1. Principal originators: Elmore S. Smith, Donald A. King.
2. Date and place of Initiation: 1965 - Alberton School.
3. Overall purpose: To stimulate 6th grade students to become more aware of their role in caring for their environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To provide instruction in conservation.
   b. To gain an appreciation of our natural resources.
   c. To provide students an opportunity to study man's relationship to soil, water, plants, and animals.
   d. To stimulate student interest in natural science.
2. New instructional materials being produced: Yes. Jr. High grades.

H. MATERIALS PRODUCED:
1. K-6: Student Handbook and Teachers Handbook.
2. 7-12: Not completed.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: Develop an ecology plot near the school.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 2.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: 6.
4. Total number of students using project materials: 25.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught: Superior Elementary School, Superior, Montana.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: No.
    b. Summer Institute: No.
    c. Evening classes: Yes. 4-6 evenings.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By teachers within the school system.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

A week of student-teacher activities centered around a stabilized pond and stream, called an ecology plot. A piece of ground for each student runs from the pond back to the sub-climax species.

P. PLANS FOR THE FUTURE:

7th and 9th grades - studies in watershed management.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Edward Heiser, Coordinator, Environmental Education Activities, 101 - 10th Street West, Billings, Montana 59102. (406)248-7421 Ext. 17

C. PROJECT HEADQUARTERS:
   1. 101 - 10th Street West, Billings, Montana 59102.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 50 persons involved - all volunteer.

E. PROJECT HISTORY:
   1. Principal originators: The faculty of the Eastern Montana College Laboratory School in cooperation with the college personnel of Eastern Montana College, under the direction of Dr. Wilson Clark.
   2. Date and place of Initiation: May 1966 - Evangelical United Brethren Church Camp near Big Timber, Montana.
   3. Overall purpose:
      a. To make conservation education an individual and public concern.
      b. To enrich, vitalize, and compliment content areas of the school curriculum by means of a firsthand observation and direct experience outside of the classroom.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To help children to become knowledgeable concerning their total environment (biological, physical, social, cultural, economic).
      b. To help children to become skillful in how to ferret out the significant aspects of a problem or situation.
      c. To help children to become sensitive to their own role in and responsibility to developing a productive and liveable environment.
      d. To help children become motivated to work constructively towards the solution of environmental problems.
   2. New instructional materials being produced: Yes. Grades 1-6 in conjunction with Eastern Montana College.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: Overview of program.

J. MATERIALS PURCHASABLE:
   1. Environmental Education Handbook - $4.00.
   2. Curriculum (Pre-camp Units) - $4.00.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed:
   a. 16 mm Film.
   b. Slide-tape presentation.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 17.
2. Number of teachers having adopted all of the project materials: 39.
3. Number of teachers using some of the project materials: 120.
4. Total number of students using project materials: 1,050.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught:
   a. Grand Avenue School, 1320 Grand Avenue, Billings, Montana.
   b. Campus School, Eastern Montana College, Billings, Montana 59101.
   c. Newman School, 605 South Billings Block, Billings, Montana 59102.
   d. Meadowlark School, 221 29th Street West, Billings, Montana 59102.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 30 semester hours.
   b. Summer Institute: Yes. 7 weeks.
   c. Evening classes: Yes - as part of the workshop.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By workshop staff and participants.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. A teachers' workshop has been held each year since program started.
2. All sixth graders from District #2 have a two-day camp experience, with solid field instruction in Environmental Education. Teachers of the sixth grade rooms involved work with the workshop staff at camp when the children are at camp.

P. PLANS FOR THE FUTURE:

Exploration of Bureau of Land Management in reference to environmental activities - possibly leading to an environmental center.

A. PROJECT TITLE: OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Garry Briner, Columbia Falls, Montana 59912.
(406)892-4321

C. PROJECT HEADQUARTERS:
1. Columbia Falls, Montana 59912.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Six public school teachers, one substitute teacher, one cook.

E. PROJECT HISTORY:
1. Principal originators: Sixth grade faculty.
2. Date and place of Initiation: 1971, Columbia Falls, Montana.
3. Overall purpose:
   a. Reinforcement of classroom instruction in the following areas: Plant life, animal life, ecology, environment, geology, chain of life, marine life, soil studies.
   b. Inspire students to greater science activity in school and adult life.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Stated in E.3.
2. New instructional materials being produced: Yes. Any level that would be approaching objectives as stated above.

H. MATERIALS PRODUCED:
1. K-6:
   a. Plan for full day of studies covering objectives as stated in E.3.
   b. Lesson plans for separate afternoons as follows: Watershed, Plant Life, Animal Life.
2. 7-12: Grade 7 is involved in a cooperating teacher class set up. The teachers have developed a program which does not involve the outdoor type of approach, a science fair approach.

I. MATERIALS AVAILABLE FREE: Not available.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: None.
2. Number of teachers having adopted all of the project materials: Sixth grade.
3. Number of teachers using some of the project materials: 6.
4. Total number of students using project materials: 175.

5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: None.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes. 8 hours. Sixth grade teachers conduct such for each other.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Forest Service (U.S.) works with the school on this program. They conduct workshops during the spring for added reinforcement to what we wish to accomplish. National Park Service (Glacier National Park) has worked with the school in setting up environmental studies.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By the teaching staff.
2. Pertinent published research studies: None.
3. Unpublished research: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Outdoor Education at Big Creek, Glacier View Ranger District, U.S. Forest Service in spring of 1971.
2. National Park Service (Glacier National Park) environmental studies area in fall of 1971. Teachers of School District No. 6 were invited to participate in the one day workshop and then given option of conducting their classes through the sites selected for outdoor study.
3. U.S. Forest Service has set aside 90 acres of land approximately 1.6 miles from the school. Classes may utilize this area as their lessons call for such.

P. PLANS FOR THE FUTURE: Enlargement of the present activities as we see the need arising.

A. PROJECT TITLE: POWELL COUNTY ENVIRONMENTAL IN-SERVICE CURRICULUM CENTER

B. PROJECT DIRECTOR: Gary D. Swant, Deer Lodge, Montana 59722.
(406)846-2451

C. PROJECT HEADQUARTERS:
1. Powell County High School, 709 Missouri Avenue, Deer Lodge, Montana 59722.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Gary D. Swant.
2. Date and place of Initiation: January 1971 - Powell County High School.
3. Overall project purpose: To provide all types of services to teachers of the county in their effort in environmental education. This includes A-V equipment, field trips and classroom instruction.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To provide all the students in the elementary and high school with educational experiences in environmental education.
   b. To provide in-service training courses for teachers.
   c. To produce a series of outdoor areas throughout the county.
2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
1. K-6:
   a. Poster series on the environment, and endangered species.
   b. Habitat Game.
   c. Flower Key by color of flower.
   d. Bird Key.
   e. Fish Key.
2. 7-12:
   a. Range Management Guide.
   b. Soils Guide.
   c. Water Pollution Guide.
   d. Conifer Key.
   e. Taxidermy Methods.
3. Others:
   a. Geology Guide.
   b. An Outdoor Guide To The Use of Powell County.
   c. Environmental Packet for Teachers.

I. MATERIALS AVAILABLE FREE:
All materials listed are available.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Local slides series and super 8 movies on local environmental problems.
2. Development of other materials anticipated:
    a. Many keys to local flora and fauna.
    b. A field guide to an inter-disciplinary approach to outdoor education.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 11.
2. Number of teachers having adopted all of the project materials: 48.
3. Number of teachers using some of the project materials: 70.
4. Total number of students using project materials: 1,600.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Elliston Grade School, Elliston, Montana.
    b. Powell County High School, Deer Lodge, Montana.
    c. Avon Grade School, Avon, Montana.
    d. Avando Grade School, Avando, Montana.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes.
    b. Summer Institute: No.
    c. Evening classes: Yes. 10 week course, one night per week.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Powell County Environmental Center, Environmental Education Packet.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. University of Montana Educational Research Unit.
2. Pertinent published research studies: Montana Education Magazine, May Issue, Title - "Environmental Education in a Rural Setting".

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Development of curriculum materials.
2. Development of outdoor areas.

P. PLANS FOR THE FUTURE:

Development of a pheasant habitat area for small game management. The approach here is inter-disciplinary.

A. PROJECT TITLE: (CONSERVATION AND SUMMER CAMPING)

B. PROJECT DIRECTOR: Calvin Ryder, 112 Riverview 3 East, Great Falls, Montana 59404. (406)453-8723

C. PROJECT HEADQUARTERS:
   1. 100 Smelter Avenue, Great Falls, Montana 59404.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 3 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originator: Miss Margaret Adams.
   2. Date and place of Initiation: September 1967 - Great Falls, Montana.
   3. Overall purpose: Implement and direct environmental education in the Great Falls Public Schools.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. Out-of-classroom activities to teach environmental education based on ecological concepts.
      b. Awareness of state of environment.
      c. Involve students through democratic processes in problems of environment.
      d. Provide units with each out-of-classroom activity correlating the activity to the regular school curriculum.
      e. Encourage and provide the direction for interdisciplinary teaching of environmental education through integration with all subject areas.
      f. Provide in-service training for all activities and units.
      g. Provide organization, direction and leadership for out-of-classroom activities.
      h. Provide liaison between teacher and resource agencies and personnel at the municipal, county, state and national levels.
   2. New instructional materials being produced: Yes. K-6 grades, 8th grade and high school biology (grade 10).

H. MATERIALS PRODUCED:
   1. K-6:
      a. K-3 - Pet unit.
      b. 2nd - Farm unit (energy cycle).
      c. 3rd - Introduction To Microscope Modified.
      d. 4th - Water Purification.
      e. 5th - Waste Water Treatment.
      f. 5th - Soil and Habitat.
      g. 6th - Water Quality.
      h. 6th - Grassland - Forest Communities.
      i. 5th - Montana Evergreen Activity.

2. 7-12: Grade 8 - Environmental Geology - Field activity correlated with Earth Science.
3. Others: Grade 10 - Grassland Forest - Field investigating.

I. MATERIALS AVAILABLE FREE: Summary of program.

J. MATERIALS PURCHASABLE:
All materials listed under H. Available from Cal Ryder, Consultant, Environmental Education, Great Falls Public Schools, Great Falls, Montana 59404.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Slides with narration tapes.
2. Development of other materials anticipated: Film loops, film strips.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 22.
2. Number of teachers having adopted all of the project materials: 250.
3. Number of teachers using some of the project materials: 350.
4. Total number of students using project materials: 600.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: Great Falls Public Schools.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. University of Montana, Department of Education.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. School year 1969-70 was last year of Title III funding. Program was complete as listed under H with exception of 3 day camp experience for 6th grade students.
2. With adoption of program by local education agency, it was necessary to drop camp and replace it with two 1 day field trips, activities presently include all activities grades 3 - 10th as listed under H.

3. During 1970-71, a Social Ecology class was implemented at one high school, one semester elective to present social, economic and ecological viewpoints.
4. Most effort toward change has been interdisciplinary, integration with continual evaluation and evolvement to keep current and relevant.

P. PLANS FOR THE FUTURE:
Development of school ground study areas, through student participation.

A. PROJECT TITLE: CONSERVATION AND WILDLIFE PROJECT

B. PROJECT DIRECTOR: Harold G. Knapp, South Avenue, Missoula, Montana 59801. (406)549-4889

C. PROJECT HEADQUARTERS:
1. Same as B.
2. Special facilities or activities available for visitor viewing: Yes. 140 acres of school developed land, 3,000 acres of Montana Fish and Game, School cooperative project lands.

D. PRINCIPAL STAFF: 1-20 persons involved for field trips. School personnel work on Saturdays, after school, etc.

E. PROJECT HISTORY:
1. Principal originator: Harold G. Knapp.
2. Date and place of Initiation: October 1966 - Missoula County High School.
3. Overall purpose: The primary purpose of this outdoor program is the exposure of students to meaningful conservation studies. Habitat development by students create an ecological awareness that opens up a natural world of life for the student.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Ecological awareness.
   b. Habitat development for wildlife.
2. New instructional materials being produced: Yes. A continual process (grades 9-12).

H. MATERIALS PRODUCED:
1. K-6: Not applicable.
2. 7-12:
   a. A Guide To Outdoor Learning.
   b. Conservation - Survival.
3. Others: Many audio-tutorial systems have been prepared on the program.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Landscape design materials.
2. Development of other materials anticipated: A-T kits on Forest Management.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 3.
2. Number of teachers having adopted all of the project materials: 15.

3. Number of teachers using some of the project materials: 15.
4. Total number of students using project materials: 800.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught:
    a. Hillgate High School, Missoula, Montana.
    b. Sentinel High School, Missoula, Montana.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 4 hours plus.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. Title III people in Helena, Montana.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Field habitat studies and development. Approximately 100-200 acres of land has been converted from minimum to maximum habitat for wildlife by our classes.

P. PLANS FOR THE FUTURE:
Habitat and environmental improvement.

A. PROJECT TITLE: 6TH GRADE SCHOOL CAMPING

B. PROJECT DIRECTOR: Mack Peyton, c/o HPER - Chadron State College, Chadron, Nebraska 69337. (308)432-5571

C. PROJECT HEADQUARTERS:
1. Chadron State College, Chadron, Nebraska 69337.
2. Special facilities or activities available for visitor viewing: Yes. Church camp leased to Chadron State Foundation.

D. PRINCIPAL STAFF: 6th grade teachers, employed by the schools involved.

E. PROJECT HISTORY:
1. Principal originator: Mack Peyton - HPER - Chadron State College.
2. Date and place of Initiation: May 1967.
3. Overall purpose: Provide outdoor educational activities involving 6th grade students - as follow up to classroom activities.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Same as E.3.
2. New instructional materials being produced: Yes. Elementary level.

H. MATERIALS PRODUCED:
Publication by State Department of Nebraska.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 9.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: 23.
4. Total number of students using project materials: 286.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught:
   a. Chadron Middle School, Chadron, Nebraska.
   b. Bridgeport Elementary School, Bridgeport, Nebraska.
   c. Mitchell Elementary School, Mitchell, Nebraska.
   d. Sioux County Elementary School, Harrison, Nebraska.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Not answered.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 2 days.
    b. Summer Institute: Yes. 12½ days in the wilderness.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Have resource people who supply the materials at the time.
6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By those using the ideas.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

6th grade camping program - coordinated by college class and 6th graders of area schools - has grown from one school to nine schools over a period of five years. Future plans call for including additional schools since facility has been obtained - activities are broad in the areas of science, social science, language arts, conservation and physical education.

P. PLANS FOR THE FUTURE:

Tie in with relevant studies in the outdoors.

A. PROJECT TITLE: CLEAN SWEEP - AN ENVIRONMENTAL PRESERVATION PROJECT

B. PROJECT DIRECTOR: C. Douglas Gorden, Principal, West End Elementary School, 280 S. Russell Street, Fallon, Nevada 89406.
(702)423-2187

C. PROJECT HEADQUARTERS:
1. West End Elementary School, Fallon, Nevada 89406.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: None as the project was not funded. Project has been rewritten and resubmitted.

E. PROJECT HISTORY:
1. Principal originators: C. Douglas Gorden, William P. Hammer.
2. Date and place of Initiation: Not answered.
3. Overall purpose: The purpose of the field trip is to stimulate interest in the formal school curriculum by providing intriguing first hand experiences; to give a motivated purpose in learning spurring the learner to investigate many sources of information and to examine new areas of learning. We hope to develop alertness in all curriculum areas with a special emphasis on ecology. The connection between classroom studies, books, and reality should be more easily understood by the students involved. We wish to permit each student to see that every person has something unique to contribute regardless who he is!

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: Not applicable

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: PROJECT SEE (SCHOOL ENVIRONMENTAL EDUCATION)

B. PROJECT DIRECTOR: Miss Edwina H. Czajkowski, Audubon Society of New Hampshire, 63 North Main Street, Concord, New Hampshire 03301. (603)224-1896

C. PROJECT HEADQUARTERS:
   1. Audubon Society of New Hampshire, 63 North Main Street, Concord, New Hampshire 03301.
   2. Special facilities or activities available for visitor viewing: Yes. Resource Center will soon have nature center, trails, etc.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Audubon Society of New Hampshire.
   2. Date and place of Initiation: September 1970 - Concord, New Hampshire.
   3. Overall project purpose: K-12 environmental education pilot project in Concord Union School District (5,500 students, 350 teachers), to be expanded to other school districts.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. Students must be allowed to discover how the environment affects them and how they affect it.
      b. Students must be provided with the skills to preserve and protect the environment.
      c. To graduate a student who is environmentally enlightened, concerned and who has the skills necessary to repair the damage already present and "manage" his world as an increasing population forces it to change.
   2. New instructional materials being produced: Yes. Grades K-6.

H. MATERIALS PRODUCED:
   1. K-6: Flyers to announce project activities.
   2. 7-12: Flyers to announce project activities.
   3. Others: New Hampshire Audubon News, published monthly.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
   The New Hampshire Audubon News is published monthly except June and August, by the Audubon Society of New Hampshire, 63 N. Main Street, Concord, New Hampshire 03301. Subscription $1.00 a year.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   Continuous development of same type of materials.

L. PROJECT IMPLEMENTATION:
12 schools in Concord and at least 100 others in New Hampshire have access to the materials.

M. TEACHER PREPARATION:
Workshops are available to teachers using the materials.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. SEE has been able to fulfill the Audubon Society's obligations as a statewide environmental agency.
2. SEE's monthly publications are sent to a mailing list of nearly 1,000 individuals and organizations in and out of New Hampshire.
3. SEE talks and demonstrations extend statewide and have included talks to the N. H. Education Association, N. H. Library Council Conference, regional teacher workshops, garden clubs, and even a cub scout banquet.

P. PLANS FOR THE FUTURE:
Although the original funding provided for a 1½ year pilot project, wise use of our financial resources will enable us to extend the project to two full school years. However, the Audubon Society of New Hampshire will solicit the participation of outlying school districts and hopes that SEE will ultimately function as a regional school environmental education center.

A. PROJECT TITLE: KEENE ENVIRONMENTAL SCIENCE PROJECT

B. PROJECT DIRECTOR: Richard P. Tremblay, Chairman Science Department, Keene High School, Arch Street, Keene, New Hampshire 03431. (603)352-0640

C. PROJECT HEADQUARTERS:
1. Keene High School, Arch Street, Keene, New Hampshire 03431.
2. Special facilities or activities available for visitor viewing: Yes. We are in the process of planning an outdoor laboratory. The activities which may be viewed are those of learning nature and can be observed while classes in Environmental Science are in session.

D. PRINCIPAL STAFF: Director and three teachers, all members of the science department.

E. PROJECT HISTORY:
1. Principal originators: Richard P. Tremblay, Director; Randall H. Morse, teacher of biology; David P. Olson, teacher of chemistry.
2. Date and place of Initiation: June 30, 1971.
3. Overall project purpose: It is the intent of this course (project) to develop an awareness, provide the knowledge and encourage the action which will lead toward the solution of environmental problems in the Monadnock Region. The approach used in the study of such problems will be one of a scientific nature. The course is specifically designed for those students who do not intend to further their education beyond high school.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Understanding that man is part of nature rather than apart from nature.
   b. Understanding of the role that the individual can play in reversing the trend toward an "environmental crisis".
   c. Understanding that science is a method that aids in the solution of environmental issues.
   d. Knowledge that all people are responsible for the existence and solution of environmental problems.
   e. The importance of each individual in maintaining equilibrium with the environment.
   f. Concern stirring people to solve environmental problems.

2. New instructional materials being produced: Yes. We are just in the process of developing new instructional materials. Most of these take the form of audio-visual media.

H. MATERIALS PRODUCED:
Teachers Manual: Keene Environmental Science Project.
Student Laboratory and Activities Manual.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Tapes, slide series of local environment.

2. Development of other materials anticipated: A three day field workshop has been planned for the coming summer whereby teachers can travel and camp within a 100 miles plus radius of Keene. It is hoped that during this workshop much can be done relative to collecting materials and creating new instructional materials.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 3.
3. Number of teachers using some of the project materials: 1.
4. Total number of students using project materials: 96.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: Keene High School, Arch Street, Keene, N. H. 03431.

M. TEACHER PREPARATION:

For the most part, those using the materials developed the course. The materials are not commercially available.

N. PROJECT EVALUATION: None. Sufficient time has not yet elapsed to truly evaluate the effectiveness of the materials.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: (1971).

1. Six week writing session to produce the manuals listed. Summer 1971.
2. Implementation of this course of study in four 9th grade general science classes. September 1971.
3. Teacher mid-year evaluation of course activities was held in February 1972.

P. PLANS FOR THE FUTURE:

1. Hopefully we can receive sufficient funds to extend this program into the 10th grade general biology.
2. A long range plan is to have an advanced senior seminar available to academically inclined students. It is our hope that this will not only cut across science disciplines but English and social studies as well.

A. PROJECT TITLE: UNION COUNTY OUTDOOR EDUCATION CENTER

B. PROJECT DIRECTOR: Arthur J. Ryan, 525 Main Street - Apt. 3C, Chatham, New Jersey 07928. (201)635-4963

C. PROJECT HEADQUARTERS:
1. 2 Glenside Park, Berkeley Heights, New Jersey 07922.
2. Special facilities or activities available for visitor viewing: Yes. Visitors restricted to personnel from participating schools including parent-teachers associations and local environmental action groups. These visitors are scheduled by appointment to observe the program in action.

D. PRINCIPAL STAFF: 10 persons employed - temporary full-time.

E. PROJECT HISTORY:
1. Principal originators: Dr. William H. West, Superintendent of Schools, Union County, New Jersey; Mr. Emanuel Bedrick, Superintendent of Schools, Linden, New Jersey.
2. Date and place of Initiation: November 1966.
3. Overall project purpose: To fulfill the great need for quality education about conservation of natural resources coordinated with an up-to-date environmental science program. These learnings and attitudes can be learned better in the out-of-doors using outdoor laboratory methods.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Appreciation and understanding of the need for conservation of our natural resources.
   b. Acquisition and development of outdoor leisure skills which stimulate a spirit of confidence to explore, enjoy and appreciate our natural environment.
   c. To develop an appreciation of the beauty of the natural world; the development of an inquiring, observing attitude toward the fruitful earth upon which man depends.
   d. Provide an opportunity for our children to live, work and share together to develop the social skills necessary in our society.
   e. Provide a natural learning situation for the practical application of knowledge gained in the classroom.
2. New instructional materials being produced: Yes. Grades 3,4, and 5.

H. MATERIALS PRODUCED:
1. K-6:
   a. Pre-trip information in Entomology and Arachnology, Geology, Orienteering and Compass, Ornithology, Living off the Land, Pond Life, Soil Analysis, Survival.
   b. Teacher Guide.
   c. Follow-up materials for materials listed under a.

2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: Project resume.

J. MATERIALS PURCHASABLE:
1. School Guide - Day Program - $4.00 each.
2. Classroom Follow-Up Activity Material - 35¢ each.
3. Local Items:
    a. History of the Deserted Village - 25¢.
    b. Guide to Birds of the Watchung Reservation 1970 - 50¢.
    c. Cooking With Gifts from Mother Nature's Garden - 50¢.

Order from Union County Outdoor Education Center, 2 Glenside Park, Berkeley Heights, New Jersey 07922.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: Expanding and updating present material.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 46.
2. Number of teachers having adopted all of the project materials: 95.
3. Number of teachers using some of the project materials: 156.
4. Total number of students using project materials: 6,000 - 7,000 yearly.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: The entire program is conducted at the Union County Outdoor Education Center, 2 Glenside Park, Berkeley Heights, New Jersey 07922.

M. TEACHER PREPARATION:
Consultative service is available for teachers using the materials.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Spring session - $3\frac{1}{2}$ months.
2. Fall session - $3\frac{1}{2}$ months.
3. Total number of pupils participated in program since March 1, 1969 - 13,902.

P. PLANS FOR THE FUTURE: No additional activities planned.

A. PROJECT TITLE: STEPPING STONE ENVIRONMENTAL EDUCATION CENTER

B. PROJECT DIRECTOR: Donald S. Calderon, R.D. 2, Box 270, Branchville, New Jersey 07826.

C. PROJECT HEADQUARTERS:
1. Stokes State Forest, R.D. 2, Branchville, New Jersey 07826.
2. Special facilities or activities available for visitor viewing: Yes. Museum and Trail Guides.

D. PRINCIPAL STAFF: 6 persons employed full-time, 5 part-time.

E. PROJECT HISTORY:
1. Principal originators: Carteret Board of Education.
2. Date and place of Initiation: March 1968. Present site.
3. Overall purpose: Public School and Teacher Training - Environmental Education Programs.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: The operation of a facility suitable for resident and day trip environmental education programs for LEA's and other interested groups.
2. New instructional materials being produced: Yes. All grade levels as needed.

H. MATERIALS PRODUCED:
All materials produced cross grade level and discipline lines. Emphasis is upon an interdisciplinary multi-sensory approach to learning. Secondary emphasis is upon ecology with the exploration and discovery approach being used.

I. MATERIALS AVAILABLE FREE: All in limited quantity.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
The Center serves a great number of school districts with a variety of curriculums. Materials are developed, used and disseminated to fit individual programs at the Center. The only exceptions to this are the following materials which have been developed specifically for use at the Center or by Center staff:
1. Trail Guide.
2. Museum Guide.
3. Maple Sugar.
4. Apple Cider.
5. Fishing In A Pond.
6. Breath of Fresh Air.
7. Teacher's Guide - Ecology.
8. Resident Outdoor Education Handbook.

9. Assorted teacher training workshop materials.
10. Miscellaneous activity guides in various disciplines.

No courses as such are taught, but the following schools have students involved in Center programs:

1. Columbus School, Carteret, New Jersey.
2. Minue School, Carteret, New Jersey.
3. Nathan Hale School, Carteret, New Jersey.
4. Abraham Lincoln School, Carteret, New Jersey.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 - 3 days.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Resident outdoor education classes.
2. Field trips at Center.
3. School site programs.
4. Workshops and training programs.

P. PLANS FOR THE FUTURE:

All future program activities will be similiar to the ones in the past.

A. PROJECT TITLE: CONSERVATION AND ENVIRONMENTAL STUDIES CENTER, INC.

B. PROJECT DIRECTOR: Dr. V. Eugene Vivian, Box 2230, R.D. #2, Browns Mills, New Jersey 08015. (609)893-9151

C. PROJECT HEADQUARTERS:
1. Whitesbog Road, Brown Mills, New Jersey 08015.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 16 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Dr. V. Eugene Vivian, Professor of Science - Glassboro State College.
2. Date and place of Initiation: September 1966 - Glassboro State College.
3. Overall purpose: To develop K-12 programs in Environmental Education in the public and private schools of New Jersey.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes - by individual staff members.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop comprehensive teacher guides and children's text and activity materials for Environmental Education.
   b. To train teachers to use Environmental Education curriculum materials and develop their own curriuculum materials for Environmental Education.
   c. To conduct exemplary programs for teachers and children in Environmental Education.
2. New instructional materials being produced: Yes. K-12 and college undergraduate.

H. MATERIALS PRODUCED:
1. K-6: Material request forms available.
2. 7-12: Material request forms available.
3. Others: Focus on Environmental Education - available at: Curriculum Development Council, Glassboro State College, Glassboro, New Jersey.

I. MATERIALS AVAILABLE FREE:
Material request forms available.

J. MATERIALS PURCHASABLE:
Material request forms available.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
   a. People in the City.
   b. Air Quality Monitoring manual
   c. Housewife's Guide to Chemicals and Food Additives (for the public).

d. Environmental Education Instruction Plans on: Ecology, litter and solid waste, sewage, noise, school and classroom environment, marine science (middle grades - junior high) and marine science (high school).
e. Main Street U.S.A.

2. Development of other materials anticipated:
   a. Related Marine Science EEIPs.
   b. An Environmental Education Instruction Plan on Anthropology.
   c. Water Pollution brochure.
   d. Additional urban materials.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 20.
2. Number of teachers having adopted all of the project materials: Not possible.
3. Number of teachers using some of the project materials: 500.
4. Total number of students using project materials: 15,000.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: Environmental Education components of various disciplines or inter-disciplinary units are taught at
   a. Toms River School, School Street, Toms River, New Jersey 08753.
   b. Atlantic City School, 1809 Pacific Avenue, Atlantic City, New Jersey 08401.
   c. Maple Shade School, 100 S. Lippincott Avenue, Maple Shade, New Jersey 08052.
   d. Camden School, City Hall Rm. 511, Camden, New Jersey 08101.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 2-3 days.
   b. Summer Institute: Yes.
   c. Evening classes: Yes. Graduate courses with credit at Glassboro State College - 2 semester hours each.
   d. Others: Headstart Supplementary Training Program, Science and Environment - 6 semester hours.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Material request form available.
6. Commercial availability of materials: Yes. Some are under contract. Instructor Publications, Dansville, New York; Ferguson-Doubleday, New York.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes.
   a. Evaluation feedback records by teachers using and purchasing materials.

        b. Publishers' contracts.
        c. Continued sales of curriculum materials.
        d. System analysis self-evaluation instruments.
    2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES:
    1. On-site programs.
    2. Day trip Environmental Education programs.
    3. Resident Environmental Education programs.

P. PLANS FOR THE FUTURE:
    1. Extended development of curriculum materials.
    2. Continuation of present activities.

A. PROJECT TITLE: IDES - INTERDISCIPLINARY DEVELOPMENT OF ENVIRONMENTAL STUDIES
DEAP - DYNAMICS - ENVIRONMENTAL PROJECT

B. PROJECT DIRECTOR: Mrs. Sylvia Halpern, Head of Secondary Science, Cranford Public Schools, Thomas Street, Cranford, New Jersey 07016. (201)276-7500

C. PROJECT HEADQUARTERS:
1. Cranford Public Schools, Thomas Street, Cranford, New Jersey.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 15 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Mr. Richard Poston, Mrs. Jean Murphy, Mrs. Sylvia Halpern.
2. Date and place of Initiation: October 1970 - curriculum and instruction office.
3. Overall project purpose:
To provide on-site and off-site experiences, curricularly and co-curricularly, to:
a. Increase awareness of community problems.
b. Teach problem solving techniques.
c. To help solve community problems.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Stated in E.3.
2. New instructional materials being produced: Yes. Grades 7-12.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12: Units.
a. Soil testing - grades 7-10.
b. Water pollution - grade 9.
c. Anthropology - grade 11.
d. Film on use of water testing kit - grade 9.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Interdisciplinary Science - Social Studies Syllabus.
2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 3.
2. Number of teachers having adopted all of the project materials: 5.
3. Number of teachers using some of the project materials: 15.
4. Total number of students using project materials: 350.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    - a. Hillside Avenue Junior High School, Hillside Avenue, Cranford, New Jersey.
    - b. Orange Avenue Junior High School, Orange Avenue, Cranford, New Jersey.
    - c. Cranford High School, West End Place, Cranford, New Jersey.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service education program for teachers using the materials: No.
4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes. 3 hours.
    - b. Summer Institute: No.
    - c. Evening classes: No.
    - d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Hach Kit, La Motte Kit, Master Plan for Environmental Education.
6. Commercial availability of materials: Yes.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Mrs. Jean Murphy and Mr. Richard Poston, teachers primarily involved in the project.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. In class, training and activities in Life Science, Earth Science, Biology, Introductory Physical Science, and Chemistry.
2. Team teaching in Home Ec and Science, Social Studies and Science.
3. Club activities.

P. PLANS FOR THE FUTURE:

Expanding the programs to mini-unit experiences to be team taught by the four major disciplines.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Mr. Thomas Tipaldi, Board of Education, Thomas Street, Cranford, New Jersey 07016. (201)276-7500

C. PROJECT HEADQUARTERS:
1. Board of Education, Thomas Street, Cranford, New Jersey.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: All grade 6 teachers, art teachers, building principals and central office personnel.

E. PROJECT HISTORY:
1. Principal originator: Mr. Thomas Tipaldi.
2. Date and place of Initiation: 1968 - New Jersey School of Conservation, Brancheville, New Jersey.
3. Overall project purpose: To provide off-site experiences where children can compare their immediate environment with those in the off-site areas.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Not answered.
2. New instructional materials being produced: Units are under constant revision. Needs of program must be re-evaluated each year.

H. MATERIALS PRODUCED:
1. K-6: Units of study for Ornithology, Geology, Field Ecology, Water Ecology, Weather, Field Math.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: See G.2.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 8.
2. Number of teachers having adopted all of the project materials: 8.
3. Number of teachers using some of the project materials: 18.
4. Total number of students using project materials: 240.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
   a. Bloomingdale Avenue School, Cranford, New Jersey 07016.

b. Roosevelt School, Cranford, New Jersey 07016.
c. Livingston Avenue School, Cranford, New Jersey 07016.
d. Walnut Avenue School, Cranford, New Jersey 07016.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. Released time during year.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Some staff members have attended weekend sessions at various environmental education centers in New Jersey, New York and Pennsylvania.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: **Yes.**
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Off-site Environmental Education program has increased from an initial 6th grade, off-site, resident experience for two schools to 4 schools, off-site non-resident and 4 schools, off-site, resident.

P. PLANS FOR THE FUTURE:

Program is to be presented to Board of Education for consideration and for adoption within total K-6 curriculum.

A. PROJECT TITLE: THE SANDY HOOK ENVIRONMENTAL EDUCATION CENTER

B. PROJECT DIRECTOR: J. Ronald Gardella, Coordinator, Community Services Department, Brookdale Community College, 765 Newman Springs Road, Lincroft, New Jersey 07738.
(201)842-1900 Ext. 313

C. PROJECT HEADQUARTERS:
1. Brookdale Community College, Community Services Department, 765 Newman Springs Road, Lincroft, New Jersey 07738.
2. Special facilities or activities available for visitor viewing: Yes. Permission to visit participating classes is available.

D. PRINCIPAL STAFF: 2 persons employed on a part-time basis.

E. PROJECT HISTORY:
1. Principal originators: J. Ronald Gardella and Richard C. Cole in cooperation with Middletown Township Schools, Middletown, New Jersey, under an ESEA Title III Grant.
2. Date and place of Initiation: March 1966.
3. Overall project purpose:
    a. To introduce environmental education into the curriculum for area students.
    b. To provide "new" learning environments for area students.
    c. To institute an "in-service" training program in environmental education.
    d. To explore the value of "hands on" experiential based approaches to teaching.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. Introduce and support environmental education in curriculum of area schools.
    b. Provide "new" learning environments for area students.
2. New instructional materials being produced: Yes. Junior-Senior High School level.

H. MATERIALS PRODUCED:
1. K-6:
    a. A Handful of Sand, a barrier beach geology program for the elementary school.
    b. The World of the Bird Feeder, an ecology program for the elementary school.
    c. Our World in a Fish Bowl, a marine ecology program for the elementary school.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE:
Project description, publication list.

J. MATERIALS PURCHASABLE:

A Handful of Sand, The World of the Bird Feeder, and Our World in a Fish Bowl are available in a teacher edition and a student edition. Teacher editions are $2.00 each - student editions are $.50 each.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Not answered.
2. Development of other materials anticipated: Curriculum materials for environmental education curriculum programs for Spanish speaking students.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 100+.
2. Number of teachers having adopted all of the project materials: 480+.
3. Number of teachers using some of the project materials: 500+.
4. Total number of students using project materials: 6,000+.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. Shrewsbury Boro Elementary School, 20 Obre Place, Shrewsbury Borough, New Jersey 07701.
   b. Swimming River School, 220 Hance Avenue, New Shrewsbury, New Jersey 07724.
   c. Middletown Township Elementary Schools, 59 Tindall Road, Middletown, New Jersey 07748.
   d. Forrestdale School, Forrest Avenue, Rumson, New Jersey 07760.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes - 2 full days.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. H.E.W., Title III Office during 1967.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Project was terminated in June, 1969, due to cessation of Federal funding. In the spring of 1970 the program was reopened on a consortium basis involving six local school districts. It continues at present with 14 local districts cooperating. Teachers are trained in environmental education techniques, philosophy and use of field station classroom trailor. Approximately 6,000 students and 200 teachers per year are involved in the effort. Teachers plan and operate completely on their own using project facilities.

P. PLANS FOR THE FUTURE:

1. Mobile environmental monitoring vehicle and curriculum materials for grades 7-12.
2. Environmental education enrichment program for Spanish speaking students.

A. PROJECT TITLE: EDUCATION FOR SURVIVAL: ECOLOGY IN SCIENCE AND SOCIAL STUDIES

B. PROJECT DIRECTOR: David F. Moore, Executive Director of the North Jersey Conservation Foundation, 300 Mendham Road, Morristown, New Jersey 07960. (201)539-7540

C. PROJECT HEADQUARTERS:
1. 300 Mendham Road, Morristown, New Jersey 07960.
2. Special facilities or activities available for visitor viewing: Upon appointment, visitors may observe classroom activities.

D. PRINCIPAL STAFF: 10 persons employed as needed - writers, artists, editorial staff, other professionals.

E. PROJECT HISTORY:
1. Principal originators: North Jersey Conservation Foundation, Curriculum Coordinator and Superintendent of Madison Schools.
2. Date and place of Initiation: November 1966.
3. Overall project purpose: To provide guide for classroom teachers that will enable those without specific environmental training to be able to impart awareness of environment and critical factors that threaten environment and man's historical misuse of his environment to the end purpose that the generation of children now in school will be able to take intelligent action for remediation and preservation for a good habitable earth.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Create awareness.
   b. Provide information about environment.
   c. Present the channels through which action for preservation or change may be made.
   d. Provide awareness of immediate environment and information on factors that are an inherent part of environment.
   e. Make pupils aware of the critical situation which our overuse or misuse of environment has produced.
2. New instructional materials being produced: Yes. Grades 6-12.

H. MATERIALS PRODUCED:
1. K-6: Teachers' guides.
   a. Vol. 1 for grades 1,2,3.
   b. Vol. 2 for grade 4.
   c. Vol. 3 for grade 5.
   d. Vol. 4 for grade 6 (will be available about Nov. 1, 1972).

2. 7-12: Sequential guides for grades 7-12 are being readied for publication.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
  a. Grade 1, II, III - 241 pages - $5.00.
  b. Grade IV - 87 pages - $3.00.
  c. Grade V - 269 pages - $5.00.
  Order from North Jersey Conservation Foundation, 300 Mendham Road, Morristown, New Jersey 07960.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed: Slides are being developed as supplementary aids.
  2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:
  Approximately 1,000 schools have ordered one or more of the guides. We do not know to what extent they are being used. Four schools using the materials are:
    a. Branch Brook School, Ridgely Road, Smithtown, New York 11787.
    b. Carlisle Area School District, 623 West Penn Street, Carlisle, Pennsylvania 17013.
    c. Miller School, 850 Spencer Road, Brighton, Michigan 48116.
    d. Corvallis School District #509J, 1555 W. 5th Street, Corvallis, Oregon 97330.

M. TEACHER PREPARATION:
  1. Consultative service available for teachers using the materials: Yes.
  2. In-service education program for teachers using the materials: No.
  3. Pre-service training program for teachers desiring to use the materials: No.
  4. Kinds of teacher preparation programs available: Workshops have been and will be provided where possible.
  5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
  6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
  The materials have not been commercially marketed. Educators are introduced to our materials usually by seeing them somewhere rather than by presentation by sales people. On the basis of their evaluation at the time, educators then order the materials. They order additional copies after a time period which indicates to us that additional review of the materials has probably taken place.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
  1. Writer workshops for teachers 9-12.
  2. In-class use of materials grades 5-8 and revision.
  3. In-class use and revision for grades 9-12.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: IMPLEMENTATION OF STATE OF NEW JERSEY MASTER PLAN FOR ENVIRONMENTAL EDUCATION (NEW JERSEY STATE COUNCIL FOR ENVIRONMENTAL EDUCATION)

B. PROJECT DIRECTOR: Dr. Edward J. Ambry, Montclair State College, Upper Montclair, New Jersey 07043. (201)744-0362

C. PROJECT HEADQUARTERS:
1. Montclair State College, Upper Montclair, New Jersey 07043.
2. Special facilities or activities available for visitor viewing: Yes. A library of texts, games, films, filmstrips and other environmental education curriculum materials.

D. PRINCIPAL STAFF: 12 professionals and six non-professionals are regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Commissioner Carl L. Marburger and staff - New Jersey State Department of Education; Dr. Edward J. Ambry.
2. Date and place of Initiation: November 1967 - Mountain Lakes, New Jersey.
3. Overall purpose: To create an environmentally literate citizenry in New Jersey.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Available upon request from Council.
2. New instructional materials being produced: Yes. Elementary and secondary levels.

H. MATERIALS PRODUCED:
1. K-6: In process.
2. 7-12: In process.
3. Others:
   a. Evaluation for Environmental Education - A Systems Analysis Approach for Self-Evaluation (1969).
   b. New Jersey Environmental and Outdoor Education Projects - A Compilation.
   c. Directory of Organized Camps in New Jersey.
   d. National Listing of Environmental and Outdoor Education Programs.
   e. Environmental Education film entitled, "Later...perhaps".
   f. New Jersey State Master Plan for Environmental Education.
   g. Proposal-A State Model Environmental Education Program for Region II, U.S.O.E.

I. MATERIALS AVAILABLE FREE:
1. A condensation of New Jersey State Master Plan for Environmental Education.
2. A listing - Sources of Free or Inexpensive Environmental Materials.

J. MATERIALS PURCHASABLE:

1. Evaluation for Environmental Education-Leasco Information Products, Inc., ERIC Document Reproduction Service, 4827 Rugby Avenue, Bethesda, Md. 20014. ED 033 801 ($.65 microfiche, $3.29 Hard Copy).
2. National Listing of Environmental and Outdoor Education Programs, National Cash Register Co., 4936 Fairmont Avenue, Bethesda, Md. 20014. ED 024 504 ($.65 Microfiche, $3.29 Hard Copy).
3. Environmental Education film -"Later...perhaps" - available from Council (Rental $15.00 or Purchase $215.00).
4. Packets of Environmental Education materials for teachers, students and community leaders-available from Council ($1.50).

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Not applicable.
2. Development of other materials anticipated:
   a. Teacher training tapes for use on Educational TV.
   b. K-12 Environmental Education curriculum composed of materials produced commercially, locally or by Council staff.
   c. Adult Environmental Education curriculum materials.

L. PROJECT IMPLEMENTATION:

The questions listed under this section do not provide an adequate means for indicating the dissemination effort which the Council has been engaged in. The following facts are pertinent in this regard:

1. Over 1,000 copies of the evaluation instrument have been distributed.
2. 1,000 copies of the Directory of Organized Camps have been mailed throughout the State.
3. 3,000 copies of the publication New Jersey Environmental and Outdoor Education Projects have been distributed.
4. Over 1,200 copies of the New Jersey Master Plan have been distributed throughout the Nation by the Council and by the New Jersey Department of Education and the U.S. Office of Education.
5. The Council has produced over 70 copies of the film "Later... perhaps" which it sells or rents as part of its dissemination effort.
6. To satisfy the many generalized requests about the Council's functions and efforts, a fact sheet - Report to the Public - was developed and has been widely distributed.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. Staff members participate as time allows.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. New Jersey Master Plan and Region II proposal - by USOE and New Jersey Department of Education Evaluation Instrument for Environmental Education Programs by participants in a National Conference on Environmental Education held in New Jersey in May, 1968.
2. Pertinent published research studies: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Publication and dissemination of New Jersey Environmental and Outdoor Education Projects, Directory of Organized Camps in New Jersey, New Jersey Master Plan for Environmental Education and Proposal-A State Model Environmental Education Program for Region II, USOE.
2. Production and distribution of an environmental educational film "Later...perhaps".
3. Field-testing Our Man-Made Environment, an urban-oriented environmental education workbook, for the Group for Environmental Education, Philadelphia, Pennsylvania.
4. Application for and reception of ESEA Title III, Section 306 funds to implement the New Jersey Master Plan.- 1971 through 1974.
5. Development of Curriculum Guidelines for a K-12 environmental education curriculum, development of specific curricular materials and field-testing of selected materials.
6. Administration of evaluation procedures for a Small Grant Program funded under New Jersey P.L. 279.
7. Conducting a statewide survey of environmental education programs to up-date 1969 survey.

P. PLANS FOR THE FUTURE:

1. Development of K-12 Environmental Education curriculum.
2. Development and implementation of training programs for teachers, students and community leaders.
3. Coordination of environmental program implementation within the State.
4. Development and implementation of a statewide Clearinghouse providing information on materials, consultants and programs in New Jersey.

A. PROJECT TITLE: SCIENCE RESEARCH AND RESOURCE CENTER

B. PROJECT DIRECTOR: Robert K. Maxwell, 200 W. Chisum Street, Roswell, New Mexico 88201. (505)622-8942

C. PROJECT HEADQUARTERS:
  1. 100 West 11th Street, Roswell, New Mexico 88201.
  2. Special facilities or activities available for visitor viewing: Yes. Science Galleries in Natural History Section of the Museum.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: Robert K. Maxwell, Director of Federal Programs; Jerry Bowen, Science Specialist with Roswell Schools.
  2. Date and place of Initiation: June 1970 - Roswell, New Mexico.
  3. Overall purpose:
    a. Broaden the science program of the Roswell Schools.
    b. Create a Natural History Section at the Roswell Museum.
    c. Provide resource personel and materials in Science for the school district.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To expand the existing science curriculum through educational experiences that are activity oriented and directed toward the development of creative and inquiring minds.
    b. To offer field oriented classes in biology and geology for high school credit with courses to be taught outside of the regular school environment.
    c. To provide workshops and in-service training in the earth sciences for teachers.
    d. To create in each student the desire for individual investigation and expression through adequate use of the science resource center and field study.
    e. To create and maintain an up-to-date reference library in the earth and life sciences for use by teachers and students.
    f. To provide equipment, supplies, live material kits and displays for student and teacher use to supplement other materials.
    g. To build scientific collections and exhibits in zoology, botany, geology, archaeology and paleontology for student and teacher use.
    h. To provide opportunity to all children who might not otherwise be able to afford this type of experience.
  2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
  1. K-6: Portable, traveling displays in the life and earth sciences.
  2. 7-12: Same as above.
  3. Others: Educational displays located at the museum:
    a. Botanical garden.
    b. Geology gallery.
    c. Archaeology displays.
    d. Live animal displays.
    e. Natural History gallery.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
    a. Tapes of wildlife sounds for the Natural History Museum.
    b. Series of science demonstrations to be presented via TV.
  2. Development of other materials anticipated: Additions to the Natural History Section.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: 22.
  2. Number of teachers having adopted all of the project materials: 20%.
  3. Number of teachers using some of the project materials: 80%.
  4. Total number of students using project materials: Not applicable.
  5. Totals stated are estimated.
  6. Names and locations of selected schools where the course is being taught: All special science classes are taught in the museum. Guest lectures are given in all of the other schools.

M. TEACHER PREPARATION:
  1. Consultant service available for teachers using the materials: Yes.
  2. In-service education program for teachers using the materials: Yes.
  3. Pre-service training program for teachers desiring to use the materials: Yes.
  4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. Two week.
    b. Summer Institute: Yes. Two week.
    c. Evening classes: Yes. Student - 2½ hours, twice weekly.
    d. Others: None.
  5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not applicable.
  6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
  1. Has the effectiveness of the materials been evaluated: Yes. State Department of Education, Santa Fe, New Mexico; Director of

Title Programs for New Mexico, Santa Fe, New Mexico.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
See objectives under G.1.

P. PLANS FOR THE FUTURE:
Completion of objectives.

A. PROJECT TITLE: WAVE HILL CENTER FOR ENVIRONMENTAL STUDIES

B. PROJECT DIRECTOR: Richard A. Madigan, 675 W. 252nd Street, Bronx, New York 10471. (212)KI9-2055

C. PROJECT HEADQUARTERS:
  1. 675 W. 252nd Street, Bronx, New York 10471.
  2. Special facilities or activities available for visitor viewing: Not answered.

D. PRINCIPAL STAFF: Not answered.

E. PROJECT HISTORY:
  1. Principal originators: Riverdale Outdoor Laboratories, Hannah Williams, Director.
  2. Date and place of Initiation: Wave Hill was incorporated in 1965.
  3. Overall purpose: The purpose is to further environmental awareness in the community and in the schools.

F. PRESENT COMMERCIAL AFFILIATIONS:
Prentice Hall has published Open Education: Alternatives Within Our Tradition by Joseph Hassett and Arlene Weisberg.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. The training of teachers in open classroom method of teaching, to bring environmental awareness into the schools.
    b. Nature studies.
  2. New instructional materials being produced: Not answered.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE:
ECOTRIP - A multi-media environmental study aid including pamphlets, articles, etc.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed: Not answered.
  2. Development of other materials anticipated: Video taping of workshops.

L. PROJECT IMPLEMENTATION:
Course is taught at Wave Hill and N.E. Bronx Educational Park for teachers from districts.

M. TEACHER PREPARATION:
  1. Consultant service available for teachers using the materials: Yes.

2. In-serice education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 18 sessions.
    b. Summer Institute: Yes. 4 weeks.
    c. Evening classes: No.
    d. Others: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: Yes. Educational Development Center, Newton, Mass.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. Ford Foundation, EDC, Bank Street College, Lehman College.
2. Pertinent published research studies: Joseph Hassett - Open Education: Alternatives Within Our Traditions, Prentice Hall, March, 1972.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Teacher training has expanded from 30 teachers, per semester, from two school districts to 80 teachers, per semester, from five school districts.
2. Nature studies - Air and Water Pollution Workshops for area school children.

P. PLANS FOR THE FUTURE:
1. Expansion of workshop idea to include more varied subject matter.
2. Development of Hudson River Aquarium to be used in schools - illustrate water resource problems.

A. PROJECT TITLE: SCHOOL/COMMUNITY ENVIRONMENTAL STUDIES PROJECT

B. PROJECT DIRECTOR: Will Hon, 414 Ann Street, Beaufort, North Carolina 28516. (919)728-4651

C. PROJECT HEADQUARTERS:
   1. Beaufort Central School, Beaufort, North Carolina 28516.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 14 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originator: Will Hon.
   2. Date and place of Initiation: Summer of 1971 (in-service), and 1971-72 school year.
   3. Overall purpose: To create for upperclassmen a genuine alternative to the pre-conceived curriculum courses, with the hope of giving some a working knowledge of how to approach real problems and really control their own educational process in the future.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To have teachers and students create a mutually acceptable learning environment on the basis of their needs.
      b. To have students explore community issues, learn critical thinking and improve communication skills.
   2. New instructional materials being produced: Yes. Grades 11-12.

H. MATERIALS PRODUCED:
   No curriculum materials as such.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: None.
   2. Development of other materials anticipated: Case history studies of some student-generated activities are planned as a major thrust of dissemination.

L. PROJECT IMPLEMENTATION: No actual "curriculum".
   1. Number of schools now using entire set of materials: 2.
   2. Number of teachers having adopted all of the project materials: 10.
   3. Number of teachers using some of the project materials: 10.
   4. Total number of students using project materials: 150.
   5. Totals stated are definite.
   6. Names and locations of selected schools where the course is being taught:
      a. West Carteret High School, Country Club Road, Morehead

City, North Carolina.

b. East Carteret High School, Beaufort, North Carolina 28516.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 3 weeks.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: The only effective way to disseminate seems to be the present program of revolving regular classroom teachers into project for two week internships.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the project been evaluated: Yes. By in-house evaluator, Marshall Brooks.
2. Pertinent published research studies: Regular Title III reporting procedures, checked by program auditor.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Pre-service training - August 1971.
2. Program started in two high schools - September 1971.
3. Photographic laboratory established - January 1972.
4. Print shop set up - June 1972.

P. PLANS FOR THE FUTURE:

Since student projects are self-determined, their nature cannot be predicted. Therefore, the program will undoubtedly explore many new avenues within its present framework and even has the capability of shifting emphases as the year's work evolves.

A. PROJECT TITLE: SUPPLEMENTARY EDUCATIONAL CENTER

B. PROJECT DIRECTOR: Mrs. Nancy L. Raynor, 1636 Parkview Circle, Salisbury, North Carolina 28144. (704)636-3462

C. PROJECT HEADQUARTERS:
1. 1636 Parkview Circle, Salisbury, North Carolina 28144.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 8 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Public school representatives and local citizens.
2. Date and place of Initiation: July 1967. 14 North Ellis Street, Salisbury, North Carolina.
3. Overall project purpose: To provide innovative and exemplary experiences in Nature Studies and Natural Science, Local and Regional History, Visual Fine Arts, and Space Science.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To advance creativity in education and to provide varied and unusual experiences and programs in the areas listed above.
2. New instructional materials being produced: Yes. K - college and adults.

H. MATERIALS PRODUCED: Not applicable.

I. MATERIALS AVAILABLE FREE:
Resource materials on loan to teachers in preparation for program.

J. MATERIALS PURCHASABLE: Not applicable.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: 16mm film, 8mm film, and video tapes for our own personal use.
2. Development of other materials anticipated: Same as above.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of programs: 42.
2. Number of teachers having adopted all of the project programs: 600.
3. Number of teachers using some of the project programs: 700.
4. Total number of students using project programs: 22,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. Rowan County Schools Administrative Unit, East Spencer, North Carolina.

b. Davie County Schools Administrative Unit, Mocksville, North Carolina.
c. Salisbury City Schools Administrative Unit, 314 North Ellis Street, Salisbury, North Carolina.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. Some on daily basis, others 16-32 hours.
    b. Summer Institute: Yes. 16-32 hours.
    c. Evening classes: Yes. 2-3 hours.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Resources for all areas listed earlier.
6. Commercial availability of materials: All leading school suppliers.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes.
    a. The State Department of Public Instruction.
    b. School Administrators and Community Leaders.
2. Pertinent published research studies: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. The Center serves all the public and private schools in the Rowan-Davie area and other schools also.
2. Three colleges, Catawba, Livingstone, and Pfeiffer use the Center. Student teachers attend workshops here.
3. A Nature Area of approximately 35 acres is a part of the Center offering many opportunities for the study of biology, conservation, environmental problems, reforestation, and related subjects.
4. Local and Regional History receive much emphasis.
5. Astronomy is better understood through the use of the Planetarium and the Observatory.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: ENVIRONMENTAL SCIENCE STUDY CURRICULUM (ESSC)

B. PROJECT DIRECTOR: William P. Moffitt, III, ESEA Title III, P.S. Jones Junior High School, Washington, North Carolina 27889. (919)946-8266

C. PROJECT HEADQUARTERS:
1. P.S. Jones Junior High School, Washington, North Carolina 27889.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 6 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: William P. Moffitt, III, Director; Mrs. Wende Allen, Teacher; Mrs. Martha Ramsey, Teacher.
2. Date and place of Initiation: ESEA Title III project period began July 1, 1971.
3. Overall purpose: The purpose is to create in junior high students an awareness, interest, and knowledge of environmental interrelationships and to equip them with the skills necessary to formulate opinions, make decisions, and initiate change which considers those interrelationships in light of the natural balance.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Same as E.3.
2. New instructional materials being produced: Yes. Grades 8 and 9.

H. MATERIALS PRODUCED:
1. K-6: Not applicable.
2. 7-12:
   a. Curriculum materials for grades 8 and 9 are bing developed and will be ready for publication by early 1973. These will include a series of mini-courses in the areas of general ecology, social environmental problems, conservation, and pollution control.
   b. A test for these grade levels has been developed for this project by Dr. Robert F. Champlin of East Carolina University (Greenville, N.C.). It will be validated by the fall of 1972.
3. Others: None.

I. MATERIALS AVAILABLE FREE: When the materials listed above are published, they will all be free.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
An audio-visual presentation about the project will be available

after June 30, 1972. It will be on file in the N.C. State Department of Public Instruction.
2. Development of other materials anticipated: Mini-courses will be developed for earth science and physical science.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 3.
3. Number of teachers using some of the project materials: 4.
4. Total number of students using project materials: 216.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught: As this is our first year of operation, no schools have adopted our program in its entirety. Two others are using some of the materials.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: To be developed.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. Time varies.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By Mrs. Hazel Stapleton and Dr. Robert F. Champlin, East Carolina University.
2. Pertinent published research studies: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES:
Project activities have been in progress since July 1971.

P. PLANS FOR THE FUTURE:
Summer programs for students and teachers.

A. PROJECT TITLE: OUTDOOR EDUCATION CENTER

B. PROJECT DIRECTOR: Robert C. Terwillegar, 723 Floral Avenue,
Terrace Park, Ohio 45174 (315)831-0147

C. PROJECT HEADQUARTERS:
1. Shawnee Elementary School, 6100 Drake Road, Indian Hill, Cincinnati, Ohio 45243.
2. Special facilities or activities available for visitor viewing: Yes. OEC Historic Building, exhibits, site and some classes.

D. PRINCIPAL STAFF: 1 person (elementary science coordinator), teachers with their classes, and volunteers from the community.

E. PROJECT HISTORY:
1. Principal originators: Superintendent, a board member, and present director.
2. Date and place of Initiation: May 1969 - Outdoor Education Center.
3. Overall purpose:
   a. Teaching facility in the out-of-doors for investigation, experimentation, direct involvement of the children in nature related activities of the curriculum, outdoor science, math, art, music.
   b. Social studies using pioneer and early farming tools and homemaking equipment in our 170 year old building.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E-3.
2. New instruction materials being produced: Yes. Handouts for teachers and students for use at or in activities related to the center.

H. MATERIALS PRODUCED: Not applicable.

I. MATERIALS AVAILABLE FREE: Not applicable.

J. MATERIALS PURCHASABLE: Not applicable.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not applicable.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION: Not applicable.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
A 40-acre camp has been secured. Some buildings have been removed, others repaired or remodeled. Nature trails have been constructed, teaching sites established, tree plantings and gardens started,

wildlife areas designated, maps made, and a teaching museum initiated. Classes from our four elementary schools visit the center regularly. Some classes establish study plots and revisit all year. Each child will have the opportunity to do plot study during the upper elementary grades. Use occurs all year, but is heaviest in the spring. Some teams of more than 100 children spend all day at the center although groups as small as 10 have come. As many as 200 have come at one time for special events such as spring plowing.

Our activities are limited only by the physical characteristics of the site. We will plan and work on any activities a teacher might wish to try. A crew of trained volunteer leaders (parents and friends from the community) assist in leading small groups. We have worked with plants, animals, water, forest and field communities, birds, conservation, math, compass, mapping, farming, seasons, weather, history, art, music, physical education, and others. A high-school biology seminary uses the site regularly for field and pollution studies throughout the year.

Summer classes in outdoor science in the regular summer school curriculum are based at the site. The high-school summer school biology class has used the facility. Workshops for teachers are held occasionally and two university classes in outdoor education have met at the site.

P. PLANS FOR THE FUTURE:

We plan to continue to develop the site and the program along the lines previously suggested. We have established a library of resource materials in outdoor education for teachers and need to institute circulation procedures. We are working on integrating our offerings more specifically into the curriculum of each school.

A. PROJECT TITLE: LIFE SCIENCE INVESTIGATIONS: MAN AND THE ENVIRONMENT

B. PROJECT DIRECTOR: Gary Day, Educational Research Council of America, 614 W. Superior Avenue, Rockefeller Bldg. 312, Cleveland, Ohio 44113. (216)696-8222

C. PROJECT HEADQUARTERS:
   1. Same as B.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: None. This project has been completed.

E. PROJECT HISTORY:
   1. Principal originators: Science Department - Educational Research Council of America.
   2. Date and place of Initiation: September 1966 - Cleveland, Ohio.
   3. Overall purpose: To develop for teachers and learners, materials and strategies which would assist the latter in developing their "understanding of the world of living things and a greater ability and desire to investigate their environment."

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      As a result of their experiences in the program learners should:
      a. demonstrate an inquiry approach to biology and be able to design and carry out simple experiments with living organisms.
      b. understand the interaction between living organisms and their physical environment. They should recognize the complexities of ecological situations.
      c. be able to separate fact from opinion in a controversial ecological problem and state what social responsibilities are involved.
      d. be aware of individual variation in man and other organisms and recognize the uniqueness of each living thing. For example, they ought to predict that not all the organisms in a population will respond in the same way to a contaminant added to the environment.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
   1. K-6: None.
   2. 7-12:
      a. Life Science Investigations: Man and the Environment - Grades 7-8.
         Student Edition - $4.95.
         Instructional Guide - $5.55.
         Checkpoint (for evaluation) - $.90.
         Checkpoint Solution Key - $.90.
      b. Four Games and Simulations
         "The Mouse in the Maze" - $6.00.

"The Planet Management Game" - $12.00.
"The Redwood Controversy" - $7.50.
"The Pollution Game" - $9.00.

3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
All materials listed in H-2 may be purchased from: Houghton Mifflin Company, 110 Tremont Street, Boston, Massachusetts 02107.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
No data on questions 1-5. Names and locations of schools where the course is being taught:

- a. North Olmsted Junior High School, 27351 Butternut Ridge Road, North Olmsted, Ohio 44070.
- b. Bay Village Middle School, 22727 Wolf Road, Bay Village, Ohio 44140.
- c. West Junior High School, 271 West Street, Brockton, Massachusetts 02401.
- d. Harding Middle School, 16600 Hilliard Street, Lakewood, Ohio 44107.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: No.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available: Workshops are available.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: In progress.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
The second edition of the project (ERC Life Science, 1967) was extensively revised in 1970. The new edition (Life Science Investigations: Man and the Environment) was published by Houghton Mifflin Company in 1971.

P. PLANS FOR THE FUTURE: None.

A. PROJECT TITLE: AULLWOOD AUDUBON CENTER - A FACILITY OF THE NATIONAL AUDUBON SOCIETY

B. PROJECT DIRECTOR: Paul E. Knoop, Jr., 1000 Aullwood Road, Dayton, Ohio 45414. (513)890-9372

C. PROJECT HEADQUARTERS:
1. 1000 Aullwood Road, Dayton, Ohio 45414.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 7 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: A gift of land and endowment from Mrs. John Aull to National Audubon Society.
2. Date and place of Initiation: November 1, 1957.
3. Overall project purpose:
    a. An environmental education center with resident staff of teacher-naturalists.
    b. Programs and staff assistance provided on-site as well as in local schools primarily working with children and teachers in area of environmental education.
    c. An experimental center for developing and testing experimental programs.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: Yes. K-adult.

H. MATERIALS PRODUCED:
Many materials are given to teachers of groups visiting the Center to be used as a follow-up to the things they saw while visiting the Center.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE:
A Book Store with the very latest in natural history, environmental books, chart, pamphlets, prints, study cards, etc., is open at the Center.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
We don't deal with materials as much as with personal contact with teachers, administrators and students. Materials are an adjunct to this personal contact. Schools where we are working intensively include:
1. Edison Elementary School, 228 N. Broadway, Dayton, Ohio.
2. Shoup Mill School, 450 Shoup Mill Road, Dayton, Ohio.

3. Highview School, 2101 McArthur Avenue, Dayton, Ohio.

M. TEACHER PREPARATION:
1. Consultative service available for teachers: Yes.
2. In-service education program for teachers: Yes.
3. Pre-service training program for teachers: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 day - 2 weeks.
    b. Summer Institute: Yes. 2 weeks.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Visitation by school groups continues to be an important service of the Center.
2. Considerable time and effort was devoted to work with our three Ford Target Schools in Dayton - Shoup Mill, Edison and Highview.
3. The Saturday Audubon Explorer program for 5th and 6th grade children was available throughout the school year.
4. Summer workshops for teachers and youth leaders are held.
5. Two week environmental education workshops have been conducted in cooperation with Wright State University and Miami University.
6. A 13-week Naturalist Training Program continues to attract far more applicants than can be accepted.
7. Many special meeting have been conducted at the Center.
8. Many special community services have been provided by the Center staff.

P. PLANS FOR THE FUTURE:
1. Development of study kits that teacher and students can use on our site or at a local park.
2. Work within schools with administrators and teachers in developing an effective environmental education program that any teacher can use.

A. PROJECT TITLE: (ENVIRONMENTAL PROBLEMS)

B. PROJECT DIRECTOR: Bruce Miller, 561 Montgomery Court, Columbus, Ohio 43210. (614)262-5842

C. PROJECT HEADQUARTERS:
1. Lakewood Junior High School, Route 1, Hebron, Ohio 43025.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Robert Mentzer, Assistant Superintendent, Licking County Schools
2. Date and place of Initiation: September 1971 - Lakewood Junior High School.
3. Overall project purpose: To instruct 9th grade and, in turn, 4th grade pupils in the Lakewood District about environmental problems in their community.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To monitor streams feeding into Buckeye Lake and test for phosphates and other pollutants entering the lake. 9th graders operate a 22 foot mobile laboratory and in turn instruct all 4th graders in the Lakewood District.
2. New instructional materials being produced: 9th and 4th grades.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12: Study Guide.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
Study Guide - $1.00. Order from Lakewood Junior High School, Route 1, Hebron, Ohio 43025.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Study tapes.
2. Development of other materials anticipated. Possibly a lab manual and data booklet.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 2.
3. Number of teachers using some of the project materials: 15.
4. Total number of students using project materials: 250/9th graders, 250/4th graders.

5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
    - a. Lakewood Junior High School, Route I, Hebron, Ohio 43025.
    - b. Hebron Elementary School, Hebron, Ohio 43025.
    - c. Jacksontown Elementary School, Jacksontown, Ohio 43030.
    - d. Franklin Elementary School, Route 6, Newark, Ohio 43055.

M. TEACHER PREPARATION:
Teachers presently teaching the course took special summer courses in Environmental Studies at The Ohio State University.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES:
1. Mobile laboratory in operation since January 1972.
2. Ninth grade students work in the field monitoring streams, using Hach tests for pH, temperature, dissolved O_2, dissolved CO_2, phosphates, nitrates, acidity, alkalinity, mercury, lead, detergents, turbidity, fecal coliform confirmation, fecal coliform counts, and photographing microscopic materials with new-type Polaroids.
3. Ninth grade students operate the lab at Dawes Arboretum and the National Fish Hatcheries in Hebron.

P. PLANS FOR THE FUTURE:
To expand the program. At present the 4th graders are instructed in the field by the 9th graders. This peer group instruction is highly motivating for both groups. The program will no doubt expand to other grade levels.

A. PROJECT TITLE: OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Michael FitzSimmons, Mansfield City Schools, P.O. Box 17, Mansfield, Ohio 44901. (419)522-0611

C. PROJECT HEADQUARTERS:
  1. Richland Rural Life Center, Mansfield, Ohio.
  2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: John Cunningham and committees of the Mansfield City Schools.
  2. Date and place of Initiation: Spring 1965.
  3. Overall purpose:
    a. Provide first hand experiences with outdoor environment.
    b. Enable inquiry into and discovery of the environment.
    c. Develop environmental awarenesses leading to environmental ethics.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Each student will feel responsible enough to become a caretaker of the outdoor environment and prevent pollution of it.
    b. Each student will learn some methods of science (ways of finding out) by using all his senses plus his brain for exploring, discovering, and thinking in the following ways - observing, measuring, classifying, postulating, predicting, interpreting, and other ways.
    c. Each student will understand some interrelationships between man-made and natural aspects of the environment outdoors.
    d. Each student will learn skills necessary to conserve (wisely use) the outdoor environment including ways for re-creation.

H. MATERIALS PRODUCED:
  1. K-6: Outdoor Education Book - 6th grade (student edition).
  2. 7-12: None.
  3. Others: Teacher's edition - 6th grade book plus teacher's section.

I. MATERIALS AVAILABLE FREE: Both of above.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Pre and post curriculum of activities.

2. Development of other materials anticipated: Land lab or environmental study area guides.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 17.
2. Number of teachers having adopted all of the project materials: 42.
3. Number of teachers using some of the project materials: 0.
4. Total number of students using project materials: 1,000/year.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught: The outdoor program operates at Richland Rural Life Center where students go for each of four days.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
   a. Workshops: No.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: Use 8-8:30 time in each building for resource in-service time.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

The program itself has been evaluated by teachers and administrators involved.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Project activities are outlined in student edition of outdoor education book.

P. PLANS FOR THE FUTURE:

Additional activities are being planned.

A. PROJECT TITLE: MOHICAN SCHOOL IN THE OUT-OF-DOORS

B. PROJECT DIRECTOR: Ronald Reed, Box 150, Route #2, Perrysville, Ohio 44864. (419)938-8621

C. PROJECT HEADQUARTERS:
   1. McCurdy Road - Route #2, Perrysville, Ohio 44864.
   2. Special facilities or activities available for visitor viewing: Yes. Program in general.

D. PRINCIPAL STAFF: 3 persons employed full-time, 3 part-time.

E. PROJECT HISTORY:
   1. Principal originators: Ronald Reed; D. D. Rummel, Local Superintendent; Richard Porter, County Supervisor.
   2. Date and place of Initiation: 1965.
   3. Overall purpose: Environmental-Outdoor Education Resident Setting.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. First hand learning.
      b. Experience centered education.
      c. Community living.
      d. Human understanding.
      e. Adventure in education.
   2. New instructional materials being produced: Yes. Grades 5,6 and 7.

H. MATERIALS PRODUCED:
   1. K-6:
      a. "Pioneer" student textbook.
      b. Handouts for outdoor study.
      c. Curriculum guide.
   2. 7-12: Same as above.
   3. Others:
      a. Materials for preparing for the resident experience.
      b. Mohican Newsletter.
      c. Picture Dissemination Booklet.
      d. Poetry Booklet.
      e. Evaluation.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
   1. Picture Booklet - $.50.
   2. Student Textbook - $2.00.
   3. Student Teacher Handbook - $1.00.
   4. Curriculum Guide - $2.00.
   5. Planning Proposal - $1.00.
   6. Operational Proposal - $1.00.

7. Permanent Staff Manual - $1.00.
8. School Packet - $1.00.
9. Evaluation - $2.00.
10. Mohican Newsletter - $1.00.
11. Poetry Booklets - $.50.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Several tapes/slide-presentations on many subjects - ecology, apple butter making, etc.
2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 31.
2. Number of teachers having adopted all of the project materials: 50.
3. Number of teachers using some of the project materials: Unknown.
4. Total number of students using project materials: 2,100.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: Schools send students to us.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available: Weekend workshop only.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. 2,000 students per year.
2. 50 teachers per year.
3. Resident outdoor education each week is different.

P. PLANS FOR THE FUTURE:
More of our students are now coming from large urban areas than before and we adjust to this as the situation arises.

A. PROJECT TITLE: CENTER FOR THE DEVELOPMENT OF ENVIRONMENTAL CURRICULUM

B. PROJECT DIRECTOR: Dennis M. Wint, 4284 Center Street, Willoughby, Ohio 44094. (216)946-5000 Ext. 358

C. PROJECT HEADQUARTERS:
   1. 4284 Center Street, Willoughby, Ohio 44094.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 6 professional and 1 clerical persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: ESEA Title III office - Columbus.
   2. Date and place of Initiation: September, 1970 - initial planning; August, 1971 - funding.
   3. Overall purpose:
      a. Assist with development of the environmentally literate citizen.
      b. Develop interdisciplinary environmental curriculum for grades K-12.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To survey the current philosophical environmental education concepts and to assess available resources which will be judged on a qualitative basis and a descriptive element.
      b. To develop a set of instructional objectives for the cognitive and affective areas of learner achievement.
      c. To develop an interdisciplinary curriculum for grades K-12.
      d. To develop criteria for measuring instructional progress by program participants.
      e. To provide for dissemination of the curriculum materials.
      f. To conduct leadership conferences and in-service workshops to assist in the implementation of the curriculum.
   2. New instructional materials being produced: Yes.

H. MATERIALS PRODUCED:
   1. K-6: List of tenative instructional objectives, pilot units.
   2. 7-12: None.
   3. Others:
      a. "Towards a Philosophy of Environmental Education".
      b. "Statement of Philosophy".
      c. "Education is the Key".
      d. Interim report #1 - September 1971 - February 1972.
      e. Partial compilation of operational environmental education programs in Ohio (out of print).

I. MATERIALS AVAILABLE FREE: Those listed under H.3.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed:
    a. Activities, guidelines for local schools.
    b. Objectives for grades 7-12.
    c. Survey of environmental education materials.
    d. Guidelines to community resources.
  2. Development of other materials anticipated:
    a. Evaluation criteria and design.
    b. Complete curriculum.
    c. Six month interim reports.

L. PROJECT IMPLEMENTATION: Pilot to begin September 1972.

M. TEACHER PREPARATION:
  K-6 teacher workshops.

N. PROJECT EVALUATION:
  1. Has the effectiveness of the materials been evaluated: Yes.
    a. Questionaire to contact individuals.
    b. Extensive design involving 70 teachers (K-6) in five socio-cultural communities.
  2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
  Beginning date - August 15, 1971.

P. PLANS FOR THE FUTURE:
  Extensive plan for curriculum design and evaluation, implementation, in-service preparation and dissemination.

A. PROJECT TITLE: WORTHINGTON OUTDOOR EDUCATION DEPARTMENT

B. PROJECT DIRECTOR: John Dean Freund, 1755 Justice Avenue, Columbus, Ohio 43229. (614)882-5951

C. PROJECT HEADQUARTERS:
   1. 600 West Dublin-Granville Road, Worthington, Ohio 43085.
   2. Special facilities or activities available for visitor viewing: Yes. A shelter house converted to our office facility and meeting room and a classroom area with garage doors to facilitiate indoor-outdoor activity.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: The original grant application was written by Dr. Johnson and Dr. Hug. The school districts who received the grant monies were: Grandview, Westerville, and Worthington (L.E.A.), all suburban areas of Columbus, Ohio.
   2. Date and place of Initiation: Columbus, December, 1966, to June, 1967.
   3. Overall purpose: A proposal to develop facilities (land laboratories, office) and program (including teacher education workshops and teacher materials) for conservation and outdoor education for three suburban school districts in Franklin County, Ohio.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: To orient the teachers (K-12) of the three participating school districts to basic ideas of outdoor education, and to develop land areas suitable for use as an outdoor laboratory.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
   1. K-6: A Land Lab Guide for the Primary Grades, (K-3).
   2. 7-12: Bob Hill's Land Lab Guide.
   3. Others: A Manual for the Outdoor Teacher by Bob Hill and Dean Freund.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
   1. Resident Outdoor Education - $2.00.
   2. Manual for the Outdoor Teacher - $3.00.
   3. Outdoor Study Units - $2.00.
   4. Coordinating Existing Elementary School Curriculum with the Out-of-Doors - $1.00.
   5. A Guide to the School Land Laboratories - $1.00.
   6. The Summary Evaluation for Tri-District Cooperative Development of Land Laboratories for Conservation and Outdoor Education - $3.00.

7. ETC - Outdoor Education Newsletter - $1.00.
Mail requests to The Worthington Outdoor Education Department, 600 West Dublin-Granville Road, Worthington, Ohio 43085.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed:
    a. A "Critical thinking and decision-making today" unit, with an environmental bias or focus. This unit is to precede four selected field trips for which four individual sets of observation sheets have been prepared.
    b. A series of outdoor environmental mini-units for END of first grade - BEGINNING of second grade youngster. It will have an observation and coloring format.
2. Development of other materials anticipated: More of the same.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 26.
2. Number of teachers having adopted all of the project materials: 70-100.
3. Number of teachers using some of the project materials: 150-200.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught:
    a. Brookside Elementary School, 6700 McVey Blvd., Worthington, Ohio 43085.
    b. Colonial Hills Elementary School, 5800 Greenwich, Worthington, Ohio 43085.
    c. Evening Street Elementary School, 885 Evening Street, Worthington, Ohio 53085.
    d. Wilson Hill Elementary School, 6500 Northland, Worthington, Ohio 43085.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes.
    b. Summer Institute: Yes. 2 weeks.
    c. Evening classes: Yes. Through Ohio State University held at our facility - 10 weeks.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Manual for the Outdoor Teacher.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Dr. Malcolm Swan of the Outdoor Education Faculty of the Northern Illinois University.

2. Pertinent published research studies: Most of these materials are on file in the ERIC system at The Ohio State University.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Title III funds were terminated as of June 15, 1971. As a result, the staff which originally numbered three was reduced to one (certified) plus a secretary. Instead of working cooperatively in the original three districts, I am presently employed only by the Worthington schools. The basic program has continued as before.

P. PLANS FOR THE FUTURE:

More emphasis on environmental education (using that as a broader term than outdoor education) and LOCALIZING education, i.e., studying our environmental problems where they count the most AT HOME!

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Vernon Harmon, 324 West 20th Street, Ada, Oklahoma 74820. (405)332-6800

C. PROJECT HEADQUARTERS:
 1. 324 West 20th Street, Ada, Oklahama 74820.
 2. Special facilities or activities available for visitor viewing: Yes. Teacher in-service session.

D. PRINCIPAL STAFF: Staff members (22) are employed by the Ada City Schools and participate in the program on a part time basis.

E. PROJECT HISTORY:
 1. Principal originators: Vernon Harmon, Project Director; William R. Lewis, Principal, Ada Junior High School; Frank Bunch, Goddard Youth Camp, Director; Bill Germerod, Naturalist, Platt National Park.
 2. Date and place of Initiation: Spring 1969.
 3. Overall purpose: To develop an environmental awareness and ethnic.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
 1. Objectives of the project: Not answered.
 2. New instructional materials being produced: Yes. 6th grade - 8th grade.

H. MATERIALS PRODUCED:
 1. K-6: Camp Guide - 6th grade.
 2. 7-12: Camp Guide - 8th grade.
 3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
 1. Other materials currently being developed: None.
 2. Development of other materials anticipated:
  a. High school program materials.
  b. Evaluation plan.

L. PROJECT IMPLEMENTATION:
 1. Number of schools now using entire set of materials: 3.
 2. Number of teachers having adopted all of the project materials: 40.
 3. Number of teachers using some of the project materials: 60.
 4. Total number of students using project materials: 400.
 5. Totals stated are estimated.
 6. Names and locations of selected schools where the course is being taught:

a. Ada City Schools, 324 West 20th Street, Ada, Oklahoma 74820.
b. Moore Public School, Moore, Oklahoma.
c. Plano Public Schools, Plano, Texas.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: No.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 2½ days.
   b. Summer Institute: Not applicable.
   c. Evening classes: No.
   d. Others: Not applicable.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Four - 6th grade programs - with 1 week camp sessions.
2. Two - 8th grade programs - with 1 week camp sessions.
3. Eight teacher in-service sessions.

P. PLANS FOR THE FUTURE:

1. Development of high school program.
2. Development and modification of materials.
3. Development of evaluation plan.

A. PROJECT TITLE: ENVIRONMENTAL BIOLOGY

B. PROJECT DIRECTOR: Mrs. Mary Guess, 4210 North Donald Street,
Bethany, Oklahoma 73008. (405)789-2139

C. PROJECT HEADQUARTERS:
1. Bethany High School, 42nd and Asbury, Bethany, Oklahoma 73008.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Marvin Peterson, Principal, and Mary Guess, biology teacher.
2. Date and place of Initiation: August 30, 1971.
3. Overall project purpose: To make advanced biology students aware of the tremendous teaching problem we have in order to maintain some quality of life for their children.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Inform these students concerning local environment.
   b. Enlist their help in informing others.
   c. Start a clean-up program here and now.
   d. Make them aware that this is their "frontier" and that they can win.
2. New instructional materials being produced: None.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1. Numbers of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 1.
3. Number of teachers using some of the project materials: 1.
4. Total number of students using project materials: 11.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: Bethany High School, 42nd and Asbury, Bethany, Oklahoma 73008.

M. TEACHER PREPARATION: None. Only one teacher involved at present so the project is based on her educational background.

N. PROJECT EVALUATION:

The course of study seems adequate for a beginning effort. With greater student involvement, more can be accomplished.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Participated in an environmental survey of the community.
2. Assisted in community clean-up project.
3. Began an area study of pollution problems.

P. PLANS FOR THE FUTURE:

1. Participate in an area-wide paper recycling project.
2. Begin a community ecological center to cooperate with the one in Oklahoma City.
3. Continue with projects begun during the 1971-72 school year.

A. PROJECT TITLE: CONSERVATION PROBLEMS IN OUR COMMUNITY

B. PROJECT DIRECTOR: Coyle Smith, P.O. Box 368, Pawnee, Oklahoma 74058. (918)762-2660

C. PROJECT HEADQUARTERS:
  1. 710 7th Street, Pawnee, Oklahoma 74058.
  2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Not answered.

E. PROJECT HISTORY:
  1. Principal originators: Fifth grade students and teachers, Vida Gilliland and Fayra McCraz. Also Russell Lewallen, Soil Conservationist.
  2. Date and place of Initiation: Pawnee Grade School, February 1971.
  3. Overall project purpose: To acquaint the students with the conservation problems and practices in our own community.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To be able to recognize any need for improvement in conservation practices.
    b. How to improve soil, water, wildlife conservation in our community.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Not applicable.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not applicable.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: A bus tour of Pawnee County was made with 65 students, 2 teachers, 2 soil conservationists, an environmental specialist from the State Department of Education, and the school principal. Stops were made at a water purification plant, a sewage disposal plant, a cattle feed lot, an eroded field, an oil well, a nature trail, a new housing area, a state park and Keystone Dam.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: NATIONAL ENVIRONMENTAL EDUCATION DEVELOPMENT

B. PROJECT DIRECTOR: Larry L. King, 300 North Broadway, Moore, Oklahoma 73060. 794-1531 Ext. 64

C. PROJECT HEADQUARTERS:
1. Goddard Youth Camp, Sulphur, Oklahoma.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Twenty-three persons employed as classroom teachers in the schools.

E. PROJECT HISTORY:
1. Principal originator: Dr. Leslie Fisher
2. Date and place of Initiation: April, 1970. Goddard Youth Camp.
3. Overall project purpose: To develop a better understanding of the environment, the effect man has upon it, etc. A change of attitude is desired.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: What effect does man have upon his environment?
2. New instructional materials being produced: Yes, for 5th grade.

H. MATERIALS PRODUCED:
1. K-6: The materials are published by Silver Burdette for the National Park Service, the sponsoring organization.
2. 7-12: None yet.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Tape and slide presentation.
2. Movies and video tapes.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 9.
2. Number of teachers having adopted all of the project materials: 23.
3. Number of teachers using some of the project material: 25.
4. Total number of students using project materials: 147.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Plaza Towers, Upper Central, Northmoor, and Sky Ranch.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes (3 days).
    b. Summer Institute: No.
    c. Evening classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not answered.
6. Commercial availability of materials: Silver Burdette.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes, by the director and teachers and by the National Park Service.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The first NEED camp was conducted in the spring of 1970 at Goddard Youth Camp, Sulphur, Oklahoma. 147 fifth graders and 23 staff members participated in the project. The same numbers of students and staff members were involved in the camp this spring, 1971. Our 1972 5th grade camp is scheduled for the first week of May. Perhaps, we will get a junior high program started this next spring.

P. PLANS FOR THE FUTURE:

Expanding to the junior high and senior high levels.

A. PROJECT TITLE: CURRICULUM DEVELOPMENT IN OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Kermit F. Horn, 748 Pearl Street, Eugene, Oregon 97401. (503)342-5576

C. PROJECT HEADQUARTERS:
  1. 748 Pearl Street, Eugene, Oregon 97401.
  2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 6 persons employed part-time.

E. PROJECT HISTORY:
  1. Principal originators: Kermit F. Horn, John Davies.
  2. Date and place of Initiation: Fall - 1971.
  3. Overall purpose: Each participant writes multiple outdoor education activities based on field experiences in which they participated.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Plan and teach units in the Natural environment using the process approach.
    b. Gain the skill of using basic tools in outdoor education such as soil augers, Micromonolith kits, oxygen testing kits, etc.
    c. Identify local resource people.
    d. Describe existing local outdoor education programs.
  2. New instructional materials being produced: Yes. Elementary grades.

H. MATERIALS PRODUCED:
  1. K-6: A set of miscellaneous outdoor education activities placed on unisort card filing system.
  2. 7-12: None.
  3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
  New materials are developed at each workshop by teachers participating. We do not reproduce these materials.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: Not applicable.
  2. Number of teachers having adopted all of the project materials: Not applicable.
  3. Number of teachers using some of the project materials: 47.

4. Total number of students using project materials: Not applicable.

5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught:

   a. Twin Oaks Elementary School, 5380 Bailey Hill Road, Eugene, Oregon 97405.
   b. Fox Hollow Elementary School, 5055 Mahalo Street, Eugene, Oregon 97405.
   c. Harris Elementary School, 1150 East 29th Avenue, Eugene, Oregon 97405.
   d. Central Elementary School, 530 West 7th Street, Junction City, Oregon 97448.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available:

   a. Workshops: Yes. Four evening sessions and two resident weekends.
   b. Summer Institute: No.
   c. Evening classes: Yes. Four evenings - three hours each.
   d. Others: Two resident weekends at local outdoor camps.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Miscellaneous samples of outdoor education activities, lesson plan formats, equipment and resources.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By the Lane County Intermediate Education District.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

We have conducted the workshop twice now and will have a verbal evaluation from a professor in the Education Department of the University of Oregon. Changes will occur after this meeting. Our philosophy is that teachers use best that which they produce. All outdoor education activities produced are based on the process approach. Processes such as observation, measuring and predicting. Each teacher finished the course with 50+ activities.

P. PLANS FOR THE FUTURE:

Additional activities are not planned.

A. PROJECT TITLE: WASHINGTON COUNTY INTERMEDIATE EDUCATION DISTRICT ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Raymond Haag, 172 S. First Avenue, Hillsboro, Oregon 97123. (503)648-7191 Ext. 41

C. PROJECT HEADQUARTERS:
1. 172 S. First Avenue, Hillsboro, Oregon 97123.
2. Special facilities or activities available for visitor viewing: Yes. Outdoor School in Session, Counselor Training program.

D. PRINCIPAL STAFF: 25 persons employed, 3 full time, remainder seasonal.

E. PROJECT HISTORY:
1. Principal originators: Science educators, government resource personnel, industry representatives, Title III grant for Regional Outdoor Education 1966.
2. Date and place of Initiation: 1969 - Washington County, Oregon.
3. Overall project purpose: To develop a sense of wonder and spirit of inquiry concerning natural resources and commitment to learning about the out-of-doors which continues throughout life. Awareness of man's responsibility for a livable environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. To study natural resources in the outdoor environment.
    b. To lead students to discover interrelationships of the natural resources.
    c. To develop an understanding of man's relationship to his environment.
    d. To develop in students self-learning skills by providing them an opportunity to learn by doing. (Observing, classifying, communicating, measuring, inferring, interpreting data, predicting and formulating models.)
2. New instructional materials being produced: Yes, for 6th grade but much can be used for grades K-12.

H. MATERIALS PRODUCED:
1. K-6: Field Study Notebook, Student Guidebook, (6th grade).
2. 7-12: Counselor Handbook - grades 10-12.
3. Others: Teacher Handbook, Counselor Training Handbook, ESA Guidebooks.

I. MATERIALS AVAILABLE FREE: Agency materials.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. History of Environmental Sites - tapes, slides.
2. Contemporary Outdoor School Film.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 100.
2. Number of teachers having adopted all of the project materials: 150.
3. Number of teachers using some of the project material: Many teachers at all levels K-12.
4. Total number of students using project materials: 3,700.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught: Contact our office for information.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. ½ day.
    b. Summer Institute: No.
    c. Evening classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Handbooks, Student Guidebook, etc.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes, by the Washington County Testing Department.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
60 weeks of Outdoor School, 15 weeks of Pilot Projects, Counselor training sessions, Administrative Advisory Council, Counselor Sounding Board, Parent's Conference, County Fair Booth.

P. PLANS FOR THE FUTURE:
Implementing Environmental Education K-12 using ESA concept.

A. PROJECT TITLE: OUTDOOR SCHOOL

B. PROJECT DIRECTOR: Mr. Kay D. Call, 1301 Buff Street, Madras, Oregon 97741. (503)475-3292

C. PROJECT HEADQUARTERS:
1. 1301 Buff Street, Madras, Oregon 97741.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 25 persons employed regularly.

E. PROJECT HISTORY:
1. Principal originators: School District Administrators.
2. Date and place of Initiation: August 1970.
3. Overall project purpose: To put the student in a special setting, close to nature, where he will have the opportunity to take part in learning activities that will help him to develop positive values concerning man's proper relationship to his surroundings and the intelligent use of natural resources.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To reinforce classroom learning.
   b. To involve students in discovery.
   c. To develop awareness of nature.
   d. To develop wise recreational use of nature.
2. New instructional materials being produce: Yes. 6th grade.

H. MATERIALS PRODUCED:
1. K-6: Student Workbooks in Wildlife, Water, Maps, Plants, for 6th grade.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Promotion video tapes, Promotion 35 mm slides.
2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 3.
2. Number of teachers having adopted all of the project materials: 8.
3. Number of teachers using some of the project material: Unknown.
4. Total number of students using project materials: 185.
5. Totals stated are definite.

6. Names and locations of schools where the course is being taught:
   - a. Buff Elementary School, 1301 Buff Street, Madras, Oregon 97741.
   - b. Metolius Elementary School, Metolius, Oregon.
   - c. Warm Springs Elementary School, Warm Springs, Oregon.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
   - a. Workshops: No.
   - b. Summer Institute: No.
   - c. Evening classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: No.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Implemented two one-week Outdoor School Camps each year since 1970.

P. PLANS FOR THE FUTURE:

Continually revise teaching materials.

A. PROJECT TITLE: CATCH PROJECT

B. PROJECT DIRECTOR: Timothy Ash, 7733 SE Raymond, Portland, Oregon 97206. (503)777-1760

C. PROJECT HEADQUARTERS:
   1. 7733 SE Raymond, Portland, Oregon 97206.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: Four to six persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originator: Timothy Ash.
   2. Date and place of Initiation: July 1971.
   3. Overall project purpose: Establishment of an environmental education facility in a natural setting constructed by the youngsters of the greater Portland area.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To utilize the medium of a wilderness work-study site located on Larch Mountain.
      b. To provide learning activities and experiences that will utilize science processes, written and oral expression, reading skills, math skills, use of hand tools, and carpentry skills.
      c. To provide optional ways of learning for children who are experiencing difficulty in the conventional classroom setting.
      d. To establish communications with the community and increase its awareness of environmental problems.
      e. To involve members of the community in environmental work-study programs by encouraging them to contribute time, materials, and/or funds.
   2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
   1. K-6: Slide units on ecology, basic building skill lessons, basic conservation skill lessons.
   2. 7-12: Problem solving ecology packets, environmental education program slide unit, environmental education newspaper.
   3. Others: None.

I. MATERIALS AVAILABLE FREE: Newsletter plus basic information concerning project.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Feature color movie explaining program.

2. Development of other materials anticipated: Additional slide units on environmental problems.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 13.

2. Number of teachers having adopted all of the project materials: 20.

3. Number of teachers using some of the project material: 50.

4. Total number of students using project materials: 136.

5. Totals stated are definite.

6. Names and locations of schools where the course is being taught:

    a. Lent Elementary Schools, 5105 S.E. 97th Street, Portland, Oregon.
    b. Binnomerd School, 2225 S.E. 87th Street, Portland, Oregon.
    c. Marshall High School, 3905 S.E. 91st Street, Portland, Oregon.
    d. Whitman School, 7326 S.E. Flavel Street, Portland, Oregon.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Being developed.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:

    a. Workshops: Being developed.
    b. Summer Institute: No.
    c. Evening classes: No.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: In developmental stages.

6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Teachers, project evaluator, US Office of Education, youngsters using materials, participants in project.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Development of 240 acres of land into science-ecology study area.

2. Establishment of 13 environmental resource centers.

3. Development of environmental education curriculum for students, parents, teachers.

4. Environmental education curriculum newspaper for city wide.

P. PLANS FOR THE FUTURE:

More site development.

A. PROJECT TITLE: **ECO-AESTHETICS CONTINUUM**

B. PROJECT DIRECTOR: Roberta J. Caughlan, Manager, 1220 S.E. Madison Street, Portland, Oregon 97214.

C. PROJECT HEADQUARTERS:
   1. 203 Buckman School, 320 S.E. 16th Avenue, Portland, Oregon 97214.
   2. Special facilities or activities available for visitor viewing: Not answered.

D. PRINCIPAL STAFF: Project manager - full time; Graphic artist/ secretary - part time.

E. PROJECT HISTORY:
   1. Principal originator: Roberta J. Caughlan.
   2. Date and place of Initiation: Portland Public Schools, Art Department 1969-70.
   3. Overall project purpose: To increase awareness of the visual environment K-12 and beyond.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To develop a high degree of sensitivity, appreciation and discrimination toward the visual environment on the part of instructional staff and students.
      b. To create continuous learning experiences which will result in measurable growth of visual awareness and aesthetic judgment on the part of instructional staff and students.
   2. New instructional materials being produced: Yes. K-12.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Puzzles, games, kits.
      b. Discussion packets.
      c. Suggestion sheets.
      d. Traveling exhibits.
      e. Slide presentations.
      f. Book of Poetry by students K-8.
      g. Puppet plays.
      h. Involvement activity brochure.
      i. Search and See Tours.
   2. 7-12: All of the above at a more advanced level plus -
      a. Complete bibliography of Childrens' Literature pertaining to environmental concerns or visual awareness.
      b. Urban planning kit.
      c. Visual production kit.
   3. Others: Secondary and adult.
      a. Poetry kit.
      b. Poetry collection by students.

c. Outline for all-school activities.

I. MATERIALS AVAILABLE FREE: Brochure.

J. MATERIALS PURCHASABLE:
1. Suggestion Sheets.
2. Pollution Solution.
3. Urban Planning Kit.
4. Construction Kit.
5. Bibliography of Childrens' Literature.
6. Poetry Book K-8.
7. Slide/Sound Presentation - Grade 3 - Our City.
8. Slide Presentation on Line, Form and Space, Texture, Color, Rhythm-Radiation-Repetition, Homes, Signs, Trees.
9. Involvement Activities.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
    a. 3-Slide/Sound Presentation on Portland.
    b. Syllabus for three-quarter in-service sequence.
    c. Collection of Poems from secondary students.
    d. Eco-Grams.
    e. Continued development of materials already produced.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 12.
2. Number of teachers having adopted all of the project materials: 61.
3. Number of teachers using some of the project materials: 260.
4. Total number of students using project materials: 6,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Buckman School, 320 S.E. 16th Avenue, Portland, Oregon 97214.
    b. Duniway School, 7700 S.E. Reed College Place, Portland, Oregon 97202.
    c. Eliot School, 2231 N. Flint Avenue, Portland, Oregon 97227.
    d. Washington High School, 531 S.E. 14th Avenue, Portland, Oregon 97214.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes. One quarter course, three quarter sequence, trainee course.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: 1 day, 2 days, five days.
    b. Summer Institute: Seminar at Portland State University - two weeks - three credits.

c. Evening Classes: Upon request.
d. Others: Guest speakers.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By students involved in the program.
2. Pertinent published research studies: None to date.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Development of goal statement, course outline, curriculum materials K-12, evaluation program, syllabi for in-service and trainee courses, sample curriculum plan K-12, involvement activities, brochure.
2. Committee formation.
3. Programed Evaluation Reporting Technique.
4. Individual pilot school activities including poetry book, puppet play, wet land study, super graphics, living/learning center, tree planting, musical/visual production K-8 "The City", slide/sound presentation - grade 3 - "Our City".
5. Exhibit of pilot school activities.
6. Cooperative program with Portland Public Schools and Portland State University.

P. PLANS FOR THE FUTURE:
1. Continued development of all facets of the Eco-Aesthetics Continuum.
2. Increased activities school/community.
3. Increased use of Advisory Committee.
4. Completion of three slide/sound presentation on the city of Portland.
5. Mass production of games, kits, puzzles.
6. Increase services of Eco-Aesthetics Resource Center.
7. Increase number of workshops and demonstrations.
8. Development of an artist-in-residence program in cooperation with the Contempory Crafts Gallery.

A. PROJECT TITLE: MULTNOMAH COUNTY OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Warren C. Gilfillan, P.O. Box 16657, Portland, Oregon 97216. (503)255-1841

C. PROJECT HEADQUARTERS:
   1. 220 S. E. 102nd Street, Portland, Oregon.
   2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 3 persons regularly employed.

E. PROJECT HISTORY:
   1. Principal originators: Local committee; Title III Pilot - Regional Outdoor Education.
   2. Date and place of Initiation: 1966 - Portland, Oregon.
   3. Overall purpose: Week-long, resident, coed, Outdoor School for 6th grade.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: Provide environmental education to all 6th graders in Multnomah County.
   2. New instructional materials being produced: Yes. 6th grade.

H. MATERIALS PRODUCED:
   1. K-6: Handbooks for 6th grade.
   2. 7-12: None.
   3. Others: None.

I. MATERIALS AVAILABLE FREE: Brochure.

J. MATERIALS PURCHASABLE:
   1. Handbooks for Teachers, 6th Graders and Counselors.
   2. Field Study Notebook.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 200.
   2. Number of teachers having adopted all of the project materials: 320.
   3. Number of teachers using some of the project materials: 320.
   4. Total number of students using project materials: 9,000.
   5. Totals stated are definite.
   6. Names and locations of selected schools where the course is being taught: Every elementary school in Multnomah County.

M. TEACHER PREPARATION:
   1. Consultant service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. Overnight and day.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Field Study Notebook, Handbook for Teachers.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
All teachers are given an evaluation questionaire after session.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Doing largely cognitive research project spring and fall 1972.

P. PLANS FOR THE FUTURE:
Development of environmental study areas at schools throughout county.

A. PROJECT TITLE: LEARNING INVOLVEMENT FOR EXISTENCE (L.I.F.E.)

B. PROJECT DIRECTOR: Vern Anderson, 1151 S. W. Vermont, Portland, Oregon 97219. (503)246-3900

C. PROJECT HEADQUARTERS:
1. 1151 S.W. Vermont, Portland, Oregon 97219.
2. Special facilities or activities available for visitor viewing: Yes. Pre-arranged activities outside classroom.

D. PRINCIPAL STAFF: 3 persons regularly employed, 1 part-time.

E. PROJECT HISTORY:
1. Principal originator: Vern Anderson.
2. Date and place of Initiation: September 1971.
3. Overall purpose: This program is designed to help young people to get involved and thereby help the environment and change their present attitudes toward their environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Students will learn to value those qualities of environment that contribute to their appreciation of beauty, their economic well being, their good health, and ultimately to the survival of their species. They will value the political processes by which these values can become the governing values of the society.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
    a. Film about L.I.F.E. program.
    b. An evaluation of 1971-72 pilot project.
2. Development of other materials anticipated: Developing a methodology in textbook form describing methods and objectives used to achieve the overall purpose.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 3.
3. Number of teachers using some of the project materials: 3.
4. Total number of students using project materials: 110.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught: Wilson High School, 1151 S.W. Vermont, Portland, Oregon 97219.

M. TEACHER PREPARATION: None.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. By students in the course, teachers and program designers of Portland Public Schools and Environmental Education Act.
2. Pertinent published research studies: In program description.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: In program description.

P. PLANS FOR THE FUTURE: Yes.

A. PROJECT TITLE: PROJECT CARE (COOPERATIVE ACTION TO RESTORE OUR ENVIRONMENT)

B. PROJECT DIRECTOR: Dr. Donald L. Wright, Colony Office Building, Route 73 and Butler Pike, Blue Bell, Pennsylvania 19422.
(215)643-7600 Ext. 60

C. PROJECT HEADQUARTERS:
  1. Colony Office Building, Route 73 and Butler Pike, Blue Bell, Pennsylvania 19422.
  2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 8 persons regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: Steering Committee representing the participating school units in Bucks, Chester, Delaware, Montgomery and Philadelphia Counties.
  2. Date and place of Initiation: 1971 - Blue Bell, Pa.
  3. Overall purpose: Cooperative, urban-suburban efforts toward strenthening environmental education in participating schools.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To support local action programs (LAP's) in environmental education in schools throughout the five-county southeastern Pennsylvania region, both financially and with services.
    b. To achieve effective awareness of environmental problems and methods for restoring our environment.
    c. To teach, experience, and learn urban-cooperation in environmental education.
    d. To utilize learning approaches which are action-oriented and interdisciplinary.
    e. To foster community participation in environmental education.
    f. To identify and make use of local human and material resources for environmental education.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
  1. K-6: None.
  2. 7-12: None.
  3. Others: Project KARE Enviroscope, a newsletter.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 42.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: Unknown.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.
6. Names and locations of schools where LAP's are in operation:
    a. Rhodes Middle School, Allegheny West District, 29th and Clearfield Streets, Philadelphia, Pa. 19032.
    b. Walnut Street Elementary School, 6th and Walnut Streets, Darby, Pa. 19395.
    c. Westtown Lower School, Westtown, Pa. 19395.
    d. Upper Dublin High School, Loch Alsh and Ft. Washington Avenues, Ft. Washington, Pa. 19034.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes. Stress is placed here.
2. In-service education program for teachers using the materials: Yes. On request.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available: Workshops are available on request.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1971:

1. Seventeen LAP's were funded during the first year, and twenty during the second. Each receives a grant of up to $5,000 to support a variety of instructional programs dealing with specific environmental problems.
2. An Environmental Resource Center (EERC) has been established at project headquarters, to provide students, teachers, industry, and community with information, research findings, and materials relating to environmental education. A central advisory council has been organized for the purpose of obtaining guidance and support to Project CARE activities. In addition, a speakers' bureau has been established. Services by the staff include local staff development, study-site analysis, curriculum design, in-service training, environmental problems assessment, program consultation, conference participation, environmental program evaluation, and technical-equipment recommendation.

P. PLANS FOR THE FUTURE:

Continuation of activities described above, with appropriate expansion.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION CURRICULUM PROJECT

B. PROJECT DIRECTOR: Mr. Perry Culver, South Side School, Race Street, Connellsville, Pennsylvania 15425. (412)628-3300

C. PROJECT HEADQUARTERS:
  1. South Side School, Race Street, Connellsville, Pa. 15425.
  2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: This is considered a normal curricular development project of the school system.

E. PROJECT HISTORY:
  1. Principal originators: Mr. Perry Culver, Dr. John Hug.
  2. Date and place of Initiation: December 1969.
  3. Overall project purpose: To determine a model implementation plan for the introduction of a K-12 environmental education program in a medium size school district.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project: Graduating students should have the ability to:
    a. Understand the consequences of the fact that as the world population increases the quality of life will decrease.
    b. Comprehend that when the natural resources on which life depends are gone or are unusable, man will perish.
    c. Understand fully the intermingled man-made and natural environment in which he lives.
    d. Live in harmony with the immutable laws of the universe.
    e. Use his knowledge to consider his every decision in light of what the consequences of that decision will mean to the environment in which he lives.
    f. Find employment that is satisfying, sustaining, and is not contributing to the demise of his environment.
    g. Accept his fellow man and himself as worthwhile, unique, humane individuals.
    h. Live a full life.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION:
Workshops are available for teacher preparation.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
This project was initiated by the school system by asking for consultant help from Western Pennsylvania Conservancy through its Environmental Education Director, Dr. John Hug. The first nine months were spent in the consultant becoming familiar with the operation of the school system by attending principals meetings, curriculum council meetings and school board meetings. During this time various funding proposals were written and small experimental programs were begun in September, 1970, which included after school workshops for teachers, administrator workshops, school site development, and student field trips. During the summers of 1970 and 1971 a four-week summer school project titled "HUMANE" was planned and carried out as an inservice education project for fifty teachers. Approximately 500 students participated each summer.

P. PLANS FOR THE FUTURE:
We will concentrate on school site development, testing of environmental education curriculum materials, and administrator education. Additional kinds of activities will also be initiated.

A. PROJECT TITLE: CENTER FOR ENVIRONMENTAL STUDIES

B. PROJECT DIRECTOR: Fred C. Kaley, 370 S. Ridge Avenue, Greencastle, Pennsylvania 17225.

C. PROJECT HEADQUARTERS:
1. Leitersburg Road, Greencastle, Pennsylvania 17225.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 3 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Fred C. Kaley and science staff.
2. Date and place of Initiation: September 1, 1968.
3. Overall project purpose: To provide optimal opportunities for children and teachers so that they become fully appreciative of environmental awareness in their daily lives.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To establish courses in ecological studies, timber resource management and field biology adapted to the elementary and secondary school instructional level.
2. New instructional materials being produced: Yes. Grades K-10.

H. MATERIALS PRODUCED: Are being developed now.

I. MATERIALS AVAILABLE FREE:
1. A brochure.
2. A brief history of center.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
   a. 40 slides to show progress of center.
   b. 40 slides showing student activities.
2. Development of other materials anticipated: Lesson plans will be developed (K-6) to be correlated with field trips to the center.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 6.
2. Number of teachers having adopted all of the project materials: 53 (eventually).
3. Number of teachers using some of the project materials: 35.
4. Total number of students using project materials: 900.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. Greencastle Elementary School, 60 S. Washington Street, Greencastle, Pa.

b. Greencastle-Antrim Junior High School, 370 S. Ridge Avenue. Greencastle, Pa.
c. Shady Grove Elementary School, R.D. 3, Greencastle, Pa.
d. South Antrim Elementary School, 842 S. Washington Street, Greencastle, Pa.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available: Workshops - two days.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Development of facilities.
2. Development of curricula.
3. Development of field trips.
4. Printing of brochure.

P. PLANS FOR THE FUTURE:

Federal grant of approximately $25,000 to cover administrative costs, instructional materials, consultant fees, evaluation and dissemination of information to be implemented during the school year.

A. PROJECT TITLE: OUTDOOR AND ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Charles A. Rosini, 329 Lamp Post Lane,
Camp Hill, Pennsylvania 17011. (717)737-2835

C. PROJECT HEADQUARTERS:
1. 210 Oakleigh Avenue, Harrisburg, Pennsylvania 17111.
2. Special facilities or activities available for visitor viewing: Yes. Entire program and center.

D. PRINCIPAL STAFF: Winter - 15. Summer - 25.

E. PROJECT HISTORY:
1. Principal originators: ESEA Title I - George Bauman, Director, Dr. Parker, Superintendent of Schools.
2. Date and place of Initiation: Pilot - winter, 1965.
3. Overall project purpose: Outdoor and Environmental Education - Emphasis on outdoor living and life sciences.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Introduction to basic life sciences, environment and outdoor living.
   b. To stimulate an awareness of nature in city children.
2. New instructional materials being produced: Yes. K-6.

H. MATERIALS PRODUCED:
1. K-6: Guides to be in print by summer, 1972 for grades 4,5 and 6. Additional guides in experimental stages for grades K-3.
2. 7-12: Trial programs in planning stages, "Careers in Environment".
3. Others: "OEEcology Newsletter" - Brochure on Program.

I. MATERIALS AVAILABLE FREE: Above will be disseminated when published.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Filmstrips - "Nature in the City" - Series.
2. Development of other materials anticipated: Guides K-3.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 17.
2. Number of teachers having adopted all of the project materials: 275.

3. Number of teachers using some of the project materials: 275.
4. Total number of students using project materials: 8,000.
5. Totals stated are estimated.
6. Names and location of schools where the course is being taught: Course is given at the Center and is co-ordinated with the schools participating.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes
4. Kinds of teacher preparation programs available:
    a. Workshops: Planned.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: Summer - by the week.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Only our own situation.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. Self - preparing a larger evaluation currently.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
School year program for K-6. Summer program for 3-6.

P. PLANS FOR THE FUTURE:
1. Preparation of urban environment materials.
2. Expansion to some degree to grades 7-12.
3. Career in the environment training.
4. Future of program dependent on continued funding.

A. PROJECT TITLE: AN INTERDISCIPLINARY PROBLEM-SOLVING APPROACH IN ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Louis Ritrovato, R.#1, Box 392, Reading, Pennsylvania 19607. (215)777-8343

C. PROJECT HEADQUARTERS:
1. R.#1, Box 392, Reading, Pa. 19607.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 5 full time, 6 part time persons employed.

E. PROJECT HISTORY:
1. Principal originators: The Pennsylvania Bureau of Parks of the Pennsylvania Department of Environmental Resources and Berks County Intermediate School Unit.
2. Date and place of Initiation: 1969. Nolde Forest State Park.
3. Overall project purpose: To develop a model Environmental Education Center which will be introduced into other State Parks in Pennsylvania for the purpose of providing services in Environmental Education to the schools and communities of Pennsylvania.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop an interdisciplinary problem-solving curriculum in environmental education utilizing the natural and man-made facilities of the Nolde Forest State Park and surrounding communities.
   b. To provide participants with an opportunity to demonstrate or apply practical solutions to environmental problems, utilizing the developed curriculum and site facilities of the project and the environmental facilities of their local communities.
   c. To provide educational, civic, social, industrial and governmental agencies with the opportunity to visit, to participate in or observe a model environmental program in action.
2. New instructional materials being produced: Yes. Intended for K-12.

H. MATERIALS PRODUCED:
1. K-6: Elementary Science Guide to implement an interdisciplinary problem-solving approach to Environmental Education. A number of Field Activities have also been produced.
2. 7-12: Not applicable.
3. Others: Not applicable.

I. MATERIALS AVAILABLE FREE: Elementary Curriculum materials.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not applicable.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 39.
2. Number of teachers having adopted all of the project materials: 39.
3. Number of teachers using some of the project material: 75.
4. Total number of students using project materials: 2,500.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
    - a. Womelsdorf Elementary School, North 3rd. St., Womelsdorf, Pa. 19567.
    - b. Brecknock Elementary School, R.#2, Box 818, Mohnton, Pa. 19540.
    - c. Adamstown Elementary School, Adamstown, Pa. 19501.
    - d. Lauer's Park Elementary School, 2nd and Elm Sts., Reading, Pa. 19607.
    - e. St. Joseph Elementary School, 1040 N. Eighth Street, Reading, Pa. 19601.

    Also schools in: Orwigsburg, Cressona, Frederick, Reamstown, Wernersville, Birdsboro, Fleetwood, Shoemakersville, Kutztown, Lebanon, Nazareth, Bath, Pine Grove, Leesport, Tamaqua, Bernville, Elverson, Bridgeport, Easton, and Wyomissing, Pennsylvania.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    - a. Workshops: Yes.
    - b. Summer Institute: Yes. 6 weeks.
    - c. Evening classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Elementary curriculum materials, Teacher Training Syllabus.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. An Evaluation Consultant firm has been retained to develop an evaluation design and instruments to evaluate the program. The technique employed is based on the Title III guidelines from the United States Office of Educational grants in Environmental Education.
2. Pertinent published research studies: Not applicable.

5

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Prior to 1971, a major effort was being made by the Bureau of Parks to promote the concept of Environmental Education. In March, 1971, the Berks County Intermediate School Unit applied for and received a Title III grant which supplied funds for the operation of the Environmental Education Center. The program design encompasses participants from pre-school, elementary, secondary, institutions of higher education, adult, and a component for the handicapped.

P. PLANS FOR THE FUTURE:

1. Major curriculum development for K-12.
2. Field guided programs for K-12.
3. Ecology programs for undergraduate and graduate students.
4. Teacher Training Institute.
5. Adult training classes.
6. Learning resource center.
7. Workshops and seminars.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION - A RELEVANT CURRICULUM

B. PROJECT DIRECTOR: William S. Woehr, Pennridge School District, Curriculum Research and Development Center, Box 232, Sellersville, Pennsylvania 18960. (215)257-7614

C. PROJECT HEADQUARTERS:
1. Curriculum Research and Development Center, Sellersville, Pennsylvania 18960.
2. Special facilities or activities available for visitor viewing: Environmental Education Center in a park area in Upper Bucks County.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Pennridge School District, Bucks County Park Board, Bucks County School Board.
2. Date and place of Initiation: January 1967 - Pennridge School District.
3. Overall project purpose: To establish a major environmental center for use by several school districts in the upper end of the county and for community groups.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To establish a central environmental center for use by several local school districts and community use.
   b. To establish environmental centers at each local school site.
   c. To articulate environmental concerns with the science and social science curricula.
2. New instructional materials being produced: None.

H. MATERIALS PRODUCED:
An elementary science and elementary social science curriculum guide has been published.

I. MATERIALS AVAILABLE FREE:
Curriculum guides on a limited basis.

J. MATERIALS PURCHASABLE:
Curriculum guides.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
Continual updating of curriculum guides (looseleaf).

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION:
A 16 week workshop and a 1 week summer institute are available for teachers using the materials.

N. PROJECT EVALUATION:
Continual evaluation by teachers, administrators and students.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Main environmental center has been partially developed.
2. Several schools are in the process of developing environmental sites.
3. Environmental education has been articulated with elementary science and social science curriculum.

P. PLANS FOR THE FUTURE:
Program will be continued and updated on a yearly basis.

A. PROJECT TITLE: OCEANOGRAPHIC SCIENCES CONCEPTUAL SCHEMES PROJECT Title III ESEA, PL 89-10

B. PROJECT DIRECTOR: Dr. Gary L. Awkerman, Director of Natural Sciences, Charleston County School District, Division of Instruction, 3 Chisolm Street, Charleston, South Carolina 29401. (803)722-8461 Ext. 60

C. PROJECT HEADQUARTERS:
1. Science Office, Charleston County School District, Division of Instruction, 3 Chisolm Street, Charleston, South Carolina 29401.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 3 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originator: Dr. Gary L. Awkerman.
2. Date and place of Initiation: July 1970. Charleston County, South Carolina.
3. Overall project purpose: To inexpensively insert ocean science study into the science curricula of the Charleston County schools.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. The student should exhibit a significant improvement in his cognitive understanding of ocean science by passing a multiple choice test on OSCSP objectives assigned to his level.
   b. The student should exhibit a significant improvement in an affective directed subtest of the OSCSP test. The instrumentation will include an attitude and interest measure.
2. New instructional materials being produced: Yes. Grades 7-12.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12: Yes.
3. Others: Teacher in-service materials directly applicable to student activities.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Field experiences for teachers demonstrating aspects of the Charleston marine environment.

2. Development of other materials anticipated: None.

L. PROJECT IMPLEMENTATION: Not yet implemented.

M. TEACHER PREPARATION:
Teacher preparation has occurred at all phases through in-service programs and workshops.

N. PROJECT EVALUATION: Evaluation in 1972-1973.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Planning, gathering of resources, construction of conceptual schemes.
2. Selection of activities to include in conceptual schemes.
3. Development and administration of short courses on marine topics for teachers of Charleston County School District.
4. Compilation of OSCSP components for testing with trial groups.
5. Field testing of field trip activities with various groups of students from Charleston County Secondary Schools.

P. PLANS FOR THE FUTURE:
During 1972-1973, the OSCSP experimental materials will be introduced on a trial basis into several schools in the Charleston County School District. Materials will be revised and put in final form as a result of this experience. Evaluation of the program will be completed by June, 1973. Shortly thereafter, the OSCSP program will be available for distribution.

A. PROJECT TITLE: CONSERVATION CURRICULUM IMPROVEMENT PROJECT

B. PROJECT DIRECTOR: Albert H. H. Dorsey, 810 Rutledge Bldg., 1429 Senate Street, Columbia, South Carolina 29201.
(803)758-2652

C. PROJECT HEADQUARTERS:
1. 810 Rutledge Bldg., 1429 Senate Street, Columbia, South Carolina 29201.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: One full time consultant.

E. PROJECT HISTORY:
1. Principal originators: South Carolina Advisory Council on Conservation Education.
2. Date and place of Initiation: 1965 - Columbia, South Carolina.
3. Overall project purpose: To develop materials for teachers to use in integrating Environmental Conservation Education into the total curriculum.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Same as purpose of project.
2. New instructional materials being produced: Yes. Grades 1-12.

H. MATERIALS PRODUCED:
1. K-6: People and Their Environment-Teachers' Curriculum Guides to Conservation Education Grades 1-2-3, People and Their Environment Grades 4-5-6.
2. 7-12:
   a. People and Their Environment - Science - Grades 7-8-9.
   b. People and Their Environment - Social Studies - Grades 7-8-9.
   c. People and Their Environment - Social Studies - Grades 10-11-12.
   d. People and Their Environment - Outdoor Laboratory - Grades 1-12.
   e. People and Their Environment - Home Economics - Grades 9-10-11-12.
   f. People and Their Environment - Biology.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
All materials listed under H.1 and 2 are available from:
J. G. Ferguson Publishing Company, 6 North Michigan Avenue, Chicago, Illinois 60602.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: TV tapes for in-service use showing teachers some aspects of how to use "People and Their Environment" series.

2. Development of other materials anticipated: Student material.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 1300.

2. Number of teachers having adopted all of the project materials: 30,000.

3. Number of teachers using some of the project material: 30,000.

4. Total number of students using project materials: Unknown.

5. Totals stated are estimated and are for South Carolina only.

6. Names and locations of schools where the course is being taught:

    a. Darlington District #1, Box 494, Darlington, South Carolina.

    b. Clarendon District #3, Turbeville, South Carolina.

    c. Marion District #1, Marion, South Carolina.

    d. Greenville County Schools, Greenville, South Carolina.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available:

    a. Workshops: Yes. 1 day.

    b. Summer Institute: Not at this time. They have been held in the past and if funding is available, will be held again in the summer.

    c. Evening classes: No.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.

6. Commercial availability of materials: Yes. J.G. Ferguson Publishing Company.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Teacher inservice workshops through State Department of Education. Work on inservice TV tapes.

P. PLANS FOR THE FUTURE:

Teacher workshops, Inservice TV programs, Development of student material.

A. PROJECT TITLE: INTERLAKES ENVIRONMENTAL AND OUTDOOR EDUCATION PROGRAM

B.. PROJECT DIRECTOR: Major L. Boddicker, Chester Area Schools, Chester, South Dakota 57016. (605)489-2416

C. PROJECT HEADQUARTERS:
1. Chester Area Schools, No. 34, Chester, South Dakota 57016.
2. Special facilities or activities available for visitor viewing: Yes. There are study sites and environmental education activities with teachers and students nearly every day throughout the school year, summer institutes and camp-outs during the summer months.

D. PRINCIPAL STAFF: 3 full time, 6 part-time persons employed.

E. PROJECT HISTORY:
1. Principal originators: James Simpson, Dakota State College, Madison, South Dakota and Cortland J. Carnes, Superintendent, Chester Area Schools.
2. Date and place of Initiation: September, 1970.
3. Overall project purpose: Set up and implement a viable, self-supporting and sustaining environmental education process and programs adaptable and transportable to other South Dakota school districts.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop and implement a practical and successful model environmental education program for schools in South Dakota.
   b. To assemble from the environmental education groundwork laid by previous Title III and other public and private groups, a viable process and program which can be transported to other schools in this rural state.
   c. Develop an environmental education process that will be accepted and implemented by 75%+ of in-service teachers at a minimal cost to school districts.
2. New instructional materials being produced: Yes. K-8, adaptable to 9-12 and college.

H. MATERIALS PRODUCED:
1. K-6: Activity guides which follow the process and many of the ideas of the Environmental Science Center, Golden Valley, Minnesota. Teachers are encouraged to modify, rewrite, or write their own environmental education activities.
2. 7-12: 7-8 are adaptable to higher levels. Activities guides.
3. Others: Administrator's Environmental Education Evaluation Manual, Pretest for Administrators, Parents, Community Leaders and Teachers, A Process Questionnaire for Participant Teachers, A Survey of Teachers' Attitudes About Their Ability to Teach

Environmental and Outdoor Education Concepts, An Awareness and Attitude Survey Pretest for Grades 5 in Environmental Concepts, a newsletter for parents describing the program activities and purposes.

I. MATERIALS AVAILABLE FREE: Copies of all materials listed are available free from the Interlakes Environmental and Outdoor Education Program or the Department of Public Instruction, Title III Office, Pierre, South Dakota 57501.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
   a. Additional activity guides.
   b. A 20 minute color-sound film about the program and process.
   c. A series of 4-8 filmstrips and sound tapes around the in-service training facet of the program.
   d. A series of art activities to complement the other environmental education activities.
2. Development of other materials anticipated:
   a. An administrators' process guide for implementing environmental education.
   b. A notebook of tips on environmental education implementation for teachers and administrators.
   c. A guide to making environmental education equipment is being considered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 50+.
2. Number of teachers having adopted all of the project materials: 70.
3. Number of teachers using some of the project material: 300-500.
4. Total number of students using project materials: 1600.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. Chester Area Schools, No. 34, Chester, South Dakota 57016.
   b. St. Thomas Parochial School, Madison, South Dakota 57042.
   c. Lake Central Schools, Madison, South Dakota 57042.
   d. Ramona Independent School, Ramona, South Dakota 57054.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes. In cooperation with Dr. Clyde Brashier, Dakota State College, Madison, South Dakota 57042.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 4 eight hour days for each grade teacher.

b. Summer Institute: Yes. Two weeks.
c. Evening classes: No.
d. Others: On the job training in the field and classroom for each teacher in the program.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes, by the participating teachers and administrators.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The following activities have been completed:

1. In-service teacher workshops - 2 hours after school - 24+.
2. 1 - 5 day institute, April 1971 in cooperation with Dakota State College.
3. 1 - 2 week workshop, July 1971 in cooperation with Dakota State College.
4. 4 - 8 day workshops, K-8, with each teacher participating four days.
5. 300+ "on the job" training sessions in the classroom and field trips.
6. A pre-service training program established in March 1971 for 12 students who then worked in the Interlakes Environmental and Outdoor Education Program. Continued in 1972.
7. A week long wilderness campout with 14 sixth graders, June 1971, was repeated in 1972 with 38 sixth graders.
8. The environmental education activities units prepared and distributed.
9. Four evaluation instruments assembled and tested.
10. Five day workshop on individualizing environmental education instruction, May 1972.

P. PLANS FOR THE FUTURE:

Expand, test and improve, strive to improve content and process of activities. Emphasize problem solving using educations background and resources. Stress self reliance and development in teachers for making environmental education their show in their classroom. Refine and improve evaluation instruments and develop post-testing instruments.

A. PROJECT TITLE: OUTDOOR EDUCATION DEPARTMENT

B. PROJECT DIRECTOR: Miss Elizabeth Roller, 3912 Caylor Drive,
Nashville, Tennessee 37215. 298-3711

C. PROJECT HEADQUARTERS:
1. Metro Board Annex-2601 Bransford Avenue, Nashville, Tenn. 37204.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 full-time persons, 1 part time person.

E. PROJECT HISTORY:
1. Principal originators: Director of Special Projects and staff of the Nashville Metro School System.
2. Date and place of Initiation: Summer 1966. Teachers workshop.
3. Overall project purpose: To work with teachers and children in learning to use the out-of-doors as a laboratory. In this method of teaching the pupils may, through observation and direct experience, develop appreciations, skills and understandings that will enrich and supplement the indoor curriculum of the school.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To provide a method for integrating specific subject matter areas through the use of the out-of-doors.
   b. To provide motivation and enrichment for learning through first-hand experiences.
2. New instructional materials being produced:
   a. Ecology units - 2nd, 4th, 6th grades.
   b. Unit on "What is a City?" for open classroom use 4-5-6 grades.
   c. Outdoor education for the mentally retarded.

H. MATERIALS PRODUCED:
1. K-6:
   a. Outdoor Education Manual.
   b. Manual for use at Outdoor Nature Center (children's booklets for each trail).
   c. What is the EQ of Your School-?.
2. 7-12: Not answered.
3. Others: Not answered.

I. MATERIALS AVAILABLE FREE:
1. Outline of project.
2. Lesson plans for On School Site lessons.

J. MATERIALS PURCHASABLE:
1. Outdoor Education Manual - $1.50.
2. Manual for the Nature Center - $1.50.

3. What is the EQ of Your School-? - $1.00.
Order from Outdoor Education Department, Metro Board of Education, 2601 Bransford Avenue, Nashville, Tennessee 37204.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Same as G.2.
2. Development of other materials anticipated:
    a. More units on grade level.
    b. Guides to On School Site Nature Trails.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 27.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: Unknown.
4. Total number of students using project materials: 23,000.
5. Totals stated are definite (question 1) and estimated (question 4).
6. Names and locations of schools where the course is being taught: We consider this a METHOD of teaching.
    a. Clemons School.
    b. Berry School.
    c. McKissick School.
    d. McCann School.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes, but not every year.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Have held 3 week workshops for five summers.
    b. Summer Institute: Yes. Same as workshop.
    c. Evening classes: None.
    d. Others: 8 afternoons for any teachers wishing to come. Environmental Education class from 4-6:30.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes, by classroom teachers.
2. Pertinent published research studies: Title I - reports each year.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Serving 27 schools. On school site activities in ALL areas at teachers request.
2. School Nature Trails on four school sites.
3. Micro Nature Center at two schools.

4. Ten school gardens.
5. 1,000 trees a year planted on school sites.
6. Approximately 150 kits of materials and equipment sent out to schools each year. Single units, ideas and projects sent to teachers.
7. Nine conservation projects on school sites.
8. Five summer teacher workshops.
9. Five school year in-service workshops.
10. Three one-week school camps.
11. Eleven weekend conservation camps.
12. Indoor nature trail (four seasons of Tennessee) in one school.
13. One two-week day camp.

P. PLANS FOR THE FUTURE:

1. To help each school set up an Environmental Study Center on the school site.
2. Expand the weekend camp trips.
3. Add to the nature center.
4. Work with a new high school - park complex, to have a student developed trail and center.
5. Write and send to schools special units on grade level.

A. PROJECT TITLE: USE OF NORRIS DAM RESERVATION IN ENVIRONMENTAL EDUCATION.

B. PROJECT DIRECTOR: Geraldine C. Hall, Botanist, Environmental Education Planner, TVA, Division of Forestry, Fisheries, and Wildlife Development, Norris, Tennessee 37828. (615)494-7173

C. PROJECT HEADQUARTERS:
1. TVA Forestry and Fisheries Laboratory, Norris, Tenn. 37828.
2. Special facilities or activities available for visitor viewing: Yes. Visitors center, visitors fish pond, 2500 acres of woodland, forest tree nursery, and outdoor teaching stations.

D. PRINCIPAL STAFF: 5 professional people devote part-time to activity.

E. PROJECT HISTORY:
1. Principal originator: Dr. Robert E. Farmer Jr.
2. Date and place of Initiation: 1970.
3. Overall purpose: To develop The Norris Reservation as an outdoor laboratory for environmental education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: Yes. Grades 4-6.

H. MATERIALS PRODUCED:
1. K-6: Instructional units in soil erosion and natural recycling.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE:
The above instructional units, and all TVA publications on natural resources.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Instructional units on forestry, air quality, and water quality.
2. Development of other materials anticipated: Orientation Game for Norris Reservation.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: Unknown.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: 12.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught:
    a. Mt. Olive School, Knox County, Tenn.
    b. Lineton School, Oak Ridge, Tenn.
    c. Clinton Junior High School, Clinton, Tenn.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 2 days.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Development (by Roslyn Glasser, summer employee) of two instructional units. Sponsored one teacher workshop on environmental education. Aided teachers in using outdoor facilities at Norris Reservation. Purchased and equipped a Ford van to be used as a mobile environmental education laboratory. These services are available initially to school systems in the Anderson-Knox County areas.

P. PLANS FOR THE FUTURE:

Development of further instructional units and games.

A. PROJECT TITLE: COOPERATIVE SCIENCE EDUCATION CENTER, INC.

B. PROJECT DIRECTOR: Peter H. Cohan, 156 Adams Lane, Oak Ridge, Tennessee 37830.

C. PROJECT HEADQUARTERS:
1. 156 Adams Lane, Oak Ridge, Tenn. 37830.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 23 professionals and non-professionals employed regularly.

E. PROJECT HISTORY:
1. Principal originators: Peter Cohan, Director and the CSEC Board of Directors. Funding - National Science Foundation - RANN Program.
2. Date and place of Initiation: CSEC, July 1970.
3. Overall project purpose: To provide environmental information and educational experiences to the general public, educational personnel, and selected decision-makers throughout the State of Tennessee, with some services extended to Kentucky, Mississippi, Alabama, Georgia, and North Carolina.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Two program functions - Environmental Awareness Workshops and Conferences, with simulation problems being a major instruction format.
   b. Environmental Information Services providing a monthly newsletter, seminar programs for service programs, reference materials of non-technical nature about problems related to the environment, or assistance in locating suitable sources of information.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Not applicable.

I. MATERIALS AVAILABLE FREE: Issues of the monthly publication "Environmental Capsule" are available in limited numbers.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION: Not applicable.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
   1. Environmental Conferences and Seminars.
   2. Project VAMP (Volunteers For Air Monitoring Project).
   3. Information services.

P. PLANS FOR THE FUTURE:
   Project WASTE (six-state, familial solid waste study involving high school participants).

A. PROJECT TITLE: MARYVILLE COLLEGE ENVIRONMENTAL EDUCATION CENTER

B. PROJECT DIRECTOR: Lloyd Foster, P.O. Box 177, Townsend, Tennessee 37882. (615)448-2211.

C. PROJECT HEADQUARTERS:
   1. Great Smoky Mountains National Park, Townsend, Tenn. 37882.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 8 full time persons, 2 part time persons.

E. PROJECT HISTORY:
   1. Principal originators: Maryville College and the National Park Service.
   2. Date and place of Initiation: October 1, 1969.
   3. Overall project purpose: To promote environmental awareness.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To further the National Environmental Education Development (NEED Program).
      b. To serve as a training center for teachers in environmental awareness programs.
      c. To serve as a training center for elementary teacher candidates from teacher training institutions in this area.
      d. To serve in the outdoor education aspects of the special education programs (for the mentally retarded or physically handicapped) of the area school systems and to develop and test programs in this field.
      e. To serve as a research center in environmental education and environmental biology, in cooperation with other institutions of higher education.
   2. New instructional materials being produced: Yes. All levels, K through adult.

H. MATERIALS PRODUCED:
   1. K-6:
      a. K: Tremont Field Trip - Lesson Plan.
      b. 3rd-8th: First Day at Tremont (Similarities and Varieties), Flashlight Brigade, Man and Water (Interaction and Interdependence), Stream Ecology, Sensory Hike on Lumber Ridge Trail (Similarities and Varieties), The Cave (Adaptation and Evolution), The Cemetery (Continuity and Change), Walker Valley History, Little Greenbrier School and Walker Sister Home, A Teacher's Manual for the Cades Cove Environmental Study Areas In Great Smoky Mountains National Park, Evaluation and Final Report of Environmental Awareness in the Schools, Environmental Science Lesson Plans.
   2. 7-12: Most of the above plans are adaptable for secondary use.

3. Others: Administrative documents - What to Bring to Tremont, Some Possibilities This Week, Things to Do Before You Leave.

I. MATERIALS AVAILABLE FREE: Selected Lesson Plans.

J. MATERIALS PURCHASABLE:
   1. Complete set of lesson plans - $2.00.
   2. Teachers' Manual for the Cades Cove Environmental Study Areas - $2.50.
   3. Student Log Book - $.35.
   4. Environmental Science Lesson Plans - $7.00.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed:
      a. Slide (35mm) presentations.
      b. Super 8 mm movies of program.
   2. Development of other materials anticipated:
      a. Additional lesson plans as needed.
      b. A teachers' manual for Walker Valley.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 90.
   2. Number of teachers having adopted all of the project materials: 500.
   3. Number of teachers using some of the project material: 1,000.
   4. Total number of students using project materials: 3,900.
   5. Totals stated are a very close estimate.
   6. Names and locations of schools where the course is being taught:
      a. Mount Olive Elementary School, Route 3, Maryville Pike, Knoxville, Tenn.
      b. Lanier Elementary School, Maryville, Tenn. 37801.
      c. Shannondale Elementary School, Knoxville, Tenn.
      d. Rogersville Elementary School, Rogersville, Tenn.

M. TEACHER PREPARATION:
   1. Consultative service available for teachers using the materials: Yes.
   2. In-service education program for teachers using the materials: Yes.
   3. Pre-service training program for teachers desiring to use the materials: Yes.
   4. Kinds of teacher preparation programs available:
      a. Workshops: Yes. 3 days to 2 weeks.
      b. Summer Insitiute: Yes. 1 to 2 weeks.
      c. Evening classes: Yes. On demand.
   5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Listed under "H".
   6. Commercial availability of materials: NEED Program, from Silver-Burdett.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Self-evaluation.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. During the first two years of operation, more than 7000 elementary and secondary students have been through the program, and more than 2000 adults.

2. A series of innovative lesson plans have been developed and tested. The NEED program has been tested and evaluated.

3. The Center has sustained itself in an education-poor area, and largely from user fees.

P. PLANS FOR THE FUTURE:

Development of our teaching resource.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: M. T. McLean, Coordinator, 6100 Guadalupe,
Austin, Texas 78752. (512)452-9331

C. PROJECT HEADQUARTERS:
1. Austin Independent School District, 6100 Guadalupe, Austin, Texas 78752.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: One person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Austin Independent School District.
2. Date and place of Initiation: 1949 School Camp, Conservation Education.
3. Overall project purpose: Environmental awareness and enrichment of regular classroom curriculum through real observations and experiences in the community.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Same as purpose.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Some slide sets, tapes in planning stage.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Teachers involved have evaluated the program through questionnaires at various times. Responses 80-90% favorable.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Study trips in schoolyard, neighborhood, and community conducted by resource persons. Advise and general enrichment assistance to teachers.

P. PLANS FOR THE FUTURE: Conforming to changes in various curricular areas.

A. PROJECT TITLE: OUTDOOR EDUCATION AND HUMAN DEVELOPMENT

B. PROJECT DIRECTOR: J. Wendell Smith, 406 Millbrook, Corpus Christi, Texas 78418. (512)937-276[illegible]

C. PROJECT HEADQUARTERS:
1. 2505 Waldron Road, Corpus Christi, Texas 78418.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 6 persons who occupy other positions with the school, serve this project in addition to their other assignments.

E. PROJECT HISTORY:
1. Principal originators: E. J. Wranosky, Sr., J. W. Smith, Dorothy T. Arnold, W. H. Howard.
2. Date and place of Initiation: Flour Bluff School, 1966.
3. Overall project purpose: To increase the participants' understanding, knowledge of and appreciation for our natural environment and of himself in relation to others. The development of individual capacities is stressed on an individual basis and basic academic skills are incorporated in the camp program.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To provide an environment whereby basic physical facts of the surroundings and the life therein are presented.
   b. To stress relationships in the natural environment.
   c. To present methods of preserving the environment.
   d. To provide a natural environment where basic physical skills are taught and improved upon.
   e. To provide academic work in camp oriented projects, i.e., individual cost to students, gasoline mileage on the trip, height of mountains, etc.
   f. To provide individual and group work that will help show the importance of individual relationships.
2. New instructional materials being produced: Yes. Materials currently in use will be revised and augmented.

H. MATERIALS PRODUCED:
1. K-6:
   a. Organization Plan for Resident Outdoor Education, 6th grade.
   b. Academic Planning.
   c. Natural Resources.
   d. Counselor's Manual for Outdoor Education.
   e. Mental Health Factors in Human Development.
   f. Awakening Scientific Awareness Through Activities Outside the Classroom.
   g. A Course of Study for Resident Outdoor Education.
   h. Physical Development.

    i. Outdoor Education.
    j. Conservation and Geology of South Texas.
    k. Outdoor Education and Human Development Project.
    l. Outdoor Education and Human Development Project - Proceedings.
2. 7-12:
    a. Academic Planning.
    b. Natural Resources.
    c. Counselor's Manual for Outdoor Education.
    d. Mental Health Factors in Human Development.
    e. Personnel and Operations Equipment Requirements for Resident and Primitive Camping - 50 students.
    f. Fauna of Texas Gulf Coast Area.
    g. Recreational Tour 7-12.
    h. Flora of the Texas Gulf Coast.
    i. Marine Invertebrate Fauna of the Texas Gulf Coast Area.
    j. Travel.
    k. State Capital.
    l. Texas History Tour.
    m. A Course of Study for Resident Outdoor Education.
    n. Physical Development.
    o. Outdoor Education.
    p. Conservation and Geology of South Texas.
    q. Outdoor Education and Human Development Project.
    r. Outdoor Education and Human Development Project - Proceedings.
3. Others: A revised and more detailed counselor's handbook is forthcoming that will give instructions on how to handle any anticipated camp situation.

I. MATERIALS AVAILABLE FREE: These materials are available for the cost of printing and postage.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Those in use are under revision at this time.
2. Development of other materials anticipated:
    a. Video-taping of camp activities.
    b. Preparation of a permanent slide show for presentation to interested groups.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: Not answered.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project material: Not answered.
4. Total number of students using project materials: 1,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Not answered.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: No, except on request.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Flour Bluff Independent School District and teachers involved with their age groups.

2. Pertinent published research studies: Outdoor Education and Human Development Project - Evaluation P.L. 89-10.

3. Unpublished research: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: We have camped approximately 900-1,000 students per year since 1969. The project has met with success, not only from the school personnel involved and students, but from the community, also. The future of the project seems as bright as its past record.

P. PLANS FOR THE FUTURE: Continuation of program.

A. PROJECT TITLE: (ENVIRONMENTAL STUDIES)

B. PROJECT DIRECTOR: Billy M. Holifield, 1517 Avenue H, Plano, Texas 75074. (214)424-5602

C. PROJECT HEADQUARTERS:
1. 1517 Avenue H, Plano, Texas 75074.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 22 teachers are involved in the program but they are full time teachers for other subject areas.

E. PROJECT HISTORY:
1. Principal originators: Teachers and Cuna Personnel of Plano ISD.
2. Date and place of Initiation: April 1971 - Plano Schools.
3. Overall project purpose: To make students aware of their environment and to help them see some problems associated with it and to possibly offer solutions to such problems.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To develop a curriculum in Environmental Studies for all students in grades K-12. The program will consist of both indoor and outdoor activities with a limited number of students attending a one week environmental camp program.
2. New instructional materials being produced: Yes. Grades 5-12 will later be developed as a K-12 program. Some materials are presently being developed and will be used this spring.

H. MATFRIALS PRODUCED: Being produced now.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PRUCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: Not applicable at this time.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshop: Yes. 15 hours.
    b. Summer Institute: No.
    c. Evening classes: No.

N. PROJECT EVALUATION: Not applicable at this time.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not applicable.

P. PLANS FOR THE FUTURE: To expand the program to a K-12 all schools program.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION FOR ALL SEASONS IN UTAH COUNTY, UTAH

B. PROJECT DIRECTOR: Lyle R. Tregaskis, 50 North Center, American Fork, Utah 84003. (801)756-3576

C. PROJECT HEADQUARTERS:
1. 50 North Center, American Fork, Utah.
2. Special facilities or activities available for visitor viewing: Yes. A new planting of a school landscape. Camp purchased in July 1972, complete with housing facilities. Camp manual is prepared.

D. PRINCIPAL STAFF: All employees are from our regular staff.

E. PROJECT HISTORY:
1. Principal originator: Calvin Walker about 15 years ago. The program is now broader than he considered.
2. Date and place of Initiation: The federal grant was for 3 years starting in 1967.
3. Overall project purpose:
   a. A fifth grade summer camp expanded to upper grades grades through the school year.
   b. Extension of the classroom K-12 by organizing the school ground for instruction; providing keysort cards for field trip guidance; providing a teacher manual for school neighborhood use; providing kits of materials and equipment to support written ideas; provide behavioral objectives for grade level guidance in developing scope and sequence; organizing ecological sites for best use by students and teachers.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To coordinate with government agency leadership on problems of common concern.
   b. To provide teachers with field training in environmental education.
   c. To develop information file, and kits on environmental resources.
   d. To develop field laboratory sites.
   e. To develop a curriculum guide.
2. New instructional materials being produced: We are extending them for all grades.

H. MATERIALS PRODUCED:
1. K-6:
   a. Teacher's Guide for developing school and neighborhood resources.

        b. Keysort card write-ups for some suggested field trip experiences.
        c. Some film strips and tapes which have direct application to the local scene. One deals with the history of home development in the area - architecturally and by materials used.
    2. 7-12:
        a. Some application of the teacher's guide.
        b. Keysort cards.
        c. Some filmstrip development.
    3. Others: A camp manual in loose-leaf format.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
Teachers Manual - $5.00.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
    1. Other materials currently being developed:
        a. Additional keysort cards.
        b. Refinements in camp manual.
        c. A brief on local habits of 80 species of birds.
    2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION: Not known for sure. Teacher reception seems very positive.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: None now scheduled.
4. Kinds of teacher preparation programs available: None now scheduled.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: We had an evaluative device but the lateness of the published materials invalidated our measurements.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. Use of students as group leaders for younger students.
2. In-service classes of instruction not offered in our state previously:
    a. Three week course of ecology in a local canyon - a different site daily, utilizing all available agency personnel with other specialists.
    b. Field bird identification class.
    c. Entomology - locating and mounting insects with simple identification.

3. Partial listing of behavioral objectives in several subject areas.

4. Moved our summer camp to an old coal mining village - an excellent site. We have now purchased a site nearby with adequate housing and facilities for year around experiences.

P. PLANS FOR THE FUTURE:

1. The program will continue without federal funds with the support of some special state funds available. This program has centered on causing everyone to become more aware of their immediate environment. We have samples of all kinds of pollution in our valley. Pollution is just one aspect of the program that seems to emphasize social studies concepts using science as the stepping stones. The role of the social studies in high school in regards to government operation and control of our lives and resources is not emphasized to the depth needed. Hopefully, this can be modified.

2. A small Federal grant has just been awarded to develop an inter-departmental curriculum of environmental studies to include biology, English and social studies. This is to be completed by May, 1973.

A. PROJECT TITLE: GRAND COUNTY ENVIRONMENTAL ADVISORY COMMITTEE

B. PROJECT DIRECTOR: Louise Hetzel, 535 South Mount Vu Drive, Moab, Utah 84532. (801)253-1871

C. PROJECT HEADQUARTERS:
1. Grand County School District, Moab, Utah 84532.
2. Special facilities or activities available for visitor viewing: Yes. Facilities at Helen M. Knight School.

D. PRINCIPAL STAFF: 11 persons serve on the committee on a volunteer basis.

E. PROJECT HISTORY:
1. Principal originators: Louise Hetzel, Dave May - Park Service, Marvin Jensen - B.L.M.
2. Date and place of Initiation: October 1969.
3. Overall project purpose: Same as objectives below.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop in the students an awareness of the environment (local, national, and global) in which they live.
   b. Understanding of the reciprocal and mutually interdependent relationships of all components, living and nonliving, of the environment.
   c. Recognition that although man may have a greater effect upon his environment than any other creature, he still remains under the long range controls of that same environment.
2. New instruction materials being produced: Yes. K-12 curriculum.

H. MATERIALS PRODUCED:
1. K-6: Study units for social studies and science on environment.
2. 7-12: Not answered.
3. Others: Complete summer program under the following headings; 2,000 Years of Man, Mountain and Desert Ecology, Moab History, Geology Oriented Program, Economic Survey of Grand County, Resource Management, Life Science Program.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Grand County Environmental Study Guide, Grand County School District, Moab, Utah.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Slide Library of the area including animal life, plants, geology, pictograph and petroglyph of this area, Indian ruins of the area.

2. Development of other materials anticipated: Study boxes on the following: fossils, geology samples of the area, animals of the area, plants of the area.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 4.

2. Number of teachers having adopted all of the project materials: 50.

3. Number of teachers using some of the project material: 50.

4. Total number of students using project materials: 2,000.

5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught:
   a. Helen M. Knight Elementary School, Moab, Utah 84532.
   b. South East Elementary School, Moab, Utah 84532.
   c. Grand County Junior High School, Moab, Utah 84532.
   d. Grand County Senior High School, Moab, Utah 84532.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 3-4 days.
   b. Summer Institute: Yes. 3-4 days.
   c. Evening classes: No.
   d. Others: Workshops in cooperation with the University of Utah.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Available from the Forest Service, B.L.M. and Park Service.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes, by the State School Board.

2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Living in cabin at Arches for one day (second grade).

2. Having cabin built on playground.

3. Organizing of Environmental Committee.

4. Planning summer program and putting in operation for Junior and Senior High.

5. Making and completing an E.S.A. on the Helen M, Knight School grounds.

6. Writing up a guide for teachers.

7. Writing up and instructing two workshops for University of Utah. We take teachers from desert swamp to the tundra.

P. PLANS FOR THE FUTURE:

1. To form environmental clubs in the High School.
2. To intergrate environment into all curriculum K-12.
3. To increase summer programs to extend all summer and all grade levels.
4. To continue making available kits and films on desert, swamp and mountain ecology.
5. To continue having teacher workshops.
6. To extend our visual aids so that they can be put on a lending basis to meet the schools demands.

A. PROJECT TITLE: BLUE MOUNTAIN ENVIRONMENTAL SCIENCE SCHOOL

B. PROJECT DIRECTOR: Dr. Kenneth M. Topham, Box 218, Monticello, Utah 84535. (801)587-2201

C. PROJECT HEADQUARTERS:
1. Monticello High School, P.O. Box 1117, Monticello, Utah 84535.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 3 teachers plus 1 director. Each has a teaching position in the San Juan County School District.

E. PROJECT HISTORY:
1. Principal originators: Lawrence Bailey, Duane Keown, Doyle Rowley.
2. Date and place of Initiation: The pilot project was funded by the Four Corners Regional Commission. Pilot project was completed in July of 1971.
3. Overall project purpose: To develop an appreciation and understanding of mans' environment, to such an extent that, he will strive to adapt to and make wise use of natural resources.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    a. The learner will demonstrate with supportive documentation that the earth is very old but man's influence though drastic is recent.
    b. The learner will be able to present evidence to show that man can make use of natural resources without destroying his environment.
    c. The learner will demonstrate examples of life support systems of the earth and present documented evidence of why and how these support systems can be appreciated and protected.
2. New instruction materials being produced: Yes, grades 7-12. Also working on materials which can be used for the training of future teachers.

H. MATERIALS PRODUCED:
1. K-6: A curriculum guide for K-12.
2. 7-12: Not answered.
3. Others: Film and slide-sound materials on the Elementary level.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: All materials which are available can be obtained from the San Juan County School District, Box 218, Monticello, Utah 84535.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Tapes, films and slides will be developed as the program progresses.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 2.
2. Number of teachers having adopted all of the project materials: 8.
3. Number of teachers using some of the project material: 50.
4. Total number of students using project materials: 900.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
   a. Monticello High School, Box 1117, Monticello, Utah 84535.
   b. San Juan Junior High School, Box 127, Blanding, Utah 84511.
   c. Monticello Elementary School, Monticello, Utah 84535.
   d. Blanding Elementary School, Blanding, Utah 84511.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 2 weeks.
   b. Summer Institute: No.
   c. Evening classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By Dr. Kenneth M. Topham, Dr. Ronald Everett and Dr. Robert Hansen as well as Utah State Department of Education Specialist. Pre and post test results showed positive academic growth significant at the .01 level.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Our pilot project was completed in the summer of 1971. Thirty-two high school age students attended the school. These students came from three different states. A wide variety of geological features and processes were investigated. The management of timber lands, grazing lands and farming lands was investigated in several locations. The ancient inhabitants of the area and their environmental problems were the subject of extensive investigation. Water, air and visual pollution were observed and their underlying causes studied. The concepts of wilderness areas were discussed in locations where both wilderness and exploited areas were easily observed. Students were deeply involved in discussion and decision making concerning real and hypothetical environmental problems. Thirteen days were spent together. The group camped out eleven nights in locations which varied from dry, hot deserts to cool, damp mountains. In addition, they hiked over 30 miles and rode a school bus 1200 miles.

P. PLANS FOR THE FUTURE:

We plan to broaden participation base of our program. This will be accomplished in the following three areas:

1. A teacher workshop session will be conducted as a cooperative endeavor with the University of Utah.
2. Two 2 week sessions will be conducted with students from large metropolitan areas of the United States. Recruiting must be accomplished for this project.
3. Field experiences will be provided for students of the local elementary schools.

A. PROJECT TITLE: HIDDEN HAVEN ENVIRONMENTAL EDUCATION CENTER

B. PROJECT DIRECTOR: Chester L. Benson, Parowan Elementary School, Parowan, Utah 84761.

C. PROJECT HEADQUARTERS:
1. Parowan Elementary School, Parowan, Utah 84761.
2. Special facilities or activities available for visitor viewing: Yes. Self guided nature trail located 6½ miles up Parowan Canyon on U-143.

D. PRINCIPAL STAFF: None.

E. PROJECT HISTORY:
1. Principal originators: Chester L. Benson, Richard Dotson.
2. Date and place of Initiation: Summer 1969.
3. Overall purpose: The key aim is to increase the efficiency of the educational program by providing highly motivating direct experiences for boys and girls.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. The use of the Outdoor Classroom will be a part of the regular curriculum and will be related to classroom work before and after the experience to as great an extent as possible.
   b. The Outdoor Classroom will be a laboratory for direct learning in the areas of natural sciences, conservation of natural sciences, conservation of natural resources, democratic living and citizenship, worthy use of leisure time and health and physical fitness.
   c. To offer to the boys and girls of our school multitudinous educational opportunities. We strongly feel that an outdoor science laboratory will facilitate our educational goals and give the students rich experiences that they would never fully realize in the classroom alone.
2. New instructional materials being produced: Yes. Grades K-6.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Slides on plant and animal life in the immediate area.
2. Development of other materials anticipated: Trail guides.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 4.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: 12.
4. Total number of students using project materials: Unknown.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: Schools included in this type of education are in the Iron County School District, Cedar City, Utah, but most have their own plans, etc.

M. TEACHER PREPARATION:

Primarily our teacher in-service workshops are conducted on a district basis with State College of Southern Utah acting as host institution. We are now in the process of organizing an Advisory Committee on Environmental Education which will have members from the Iron County Education District, all federal agencies who are involved in types of land usage, state agencies, county agencies and Southern Utah State College plus any other interested people.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. 1½ miles of self guided nature trails.
2. A "Council Circle" seating approximately 50 people.
3. A "Fire Circle" seating 50 or more people.
4. A seating area for people doing creative writing.
5. Lay out of four miles of combination hiking and ecology trails.

P. PLANS FOR THE FUTURE:

1. Continue to develop nature trails in area.
2. Develop habitat for fish along the two streams.
3. More complete identification of the plant and animal life of the area.
4. Construction of shelter house and rest rooms on area.

A. PROJECT TITLE: MILL HOLLOW CENTER (ENVIRONMENTAL SCIENCE)

B. PROJECT DIRECTOR: Dr. Ron Beckstrom, Granite School District, 340 E. 3545 South Street, Salt Lake City, Utah 84115 (801)350-8213

C. PROJECT HEADQUARTERS:
1. Headquarters as above - project at Woodland, Utah.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 30 persons employed seasonal - June-October.

E. PROJECT HISTORY:
1. Principal originators: Granite School District, Uintah National Forest.
2. Date and place of Initiation: 1966.
3. Overall purpose: Earth and biological science plus environmental education in a primitive area.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Instruction of students in biological and physical sciences.
2. New instructional materials being produced: Yes. Grades 5-12.

H. MATERIALS PRODUCED:
1. K-6: In development.
2. 7-12: Being revised.
3. Others: None.

I. MATERIALS AVAILABLE FREE:
Brochures, maps, pictures.

J. MATERIALS PURCHASABLE:
Curricular materials when completed - summer 1972.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
Approximately 50 teachers are using some of our materials.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 3 or 5 days.
   b. Summer Institute: No.
   c. Evening classes: No.

d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Approximately 3,200 students per year spend 3-10 days in residence at the center located in a remote mountain area.

P. PLANS FOR THE FUTURE: None.

A. PROJECT TITLE: NEBO SCHOOL DISTRICT OUTDOOR EDUCATION COMMITTEE

B. PROJECT DIRECTOR: Sterling R. Swenson, 500 South Main Street, Springville, Utah 84663. (801)489-6101

C. PROJECT HEADQUARTERS:
1. 75 East Center Street, Springville, Utah 84663.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 12 persons serve on the committee.

E. PROJECT HISTORY:
1. Principal originators: Nebo School District Administrative Staff.
2. Date and place of Initiation: April 1971.
3. Overall project purpose: An outdoor environmental experience for all children in the school district of at least one week during the intermediate grades.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Inservice training for teachers.
   b. School ground programs.
   c. Nature trails.
   d. Outdoor campsite and experiences.
2. New instruction materials being produced: Yes. Elementary.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Not answered.
2. Development of other materials anticipated: Tapes and slide presentations.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 18.
2. Number of teachers having adopted all of the project materials: 350.
3. Number of teachers using some of the project material: 100.
4. Total number of students using project materials: 5,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Program is just in infant stage.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 2 per year.
    b. Summer Institute: No.
    c. Evening classes: Yes. 1 semester class B.Y.U.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:

1. Site selection.
2. Curriculum Development.
3. Building project.

A. PROJECT TITLE: DEVELOPMENT OF OUTDOOR ECOLOGICAL LABORATORY

B. PROJECT DIRECTOR: William T. Lienhard, Atkinson Street Building, Bellows Falls, Vermont 05101. (802)463-3248

C. PROJECT HEADQUARTERS:
1. Union High School, Bellows Falls, Vermont 05101.
2. Special facilities or activities available for visitor viewing: Yes. Environmental Research Center, Nature Trail Network.

D. PRINCIPAL STAFF: 1 full time person employed.

E. PROJECT HISTORY:
1. Principal originator: Harry W. Noyes, Superintendent of Schools.
2. Date and place of Initiation: February 1971. Windham Northeast Supervisory Union.
3. Overall project purpose: To establish a natural Ecology study area for the use of Science classes in the various schools in this area with personnel to carry out the program. The program involves two main aspects: to develop an awareness to the natural world, and man's interaction within the total environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To develop a waterside laboratory to enable students to study the natural habitat of the lower plants and animals.
   b. To establish a nature trail network and a geology area in the immediate environment.
   c. Hire an Ecological Research person who would work with teachers and students to develop the above mentioned areas, conduct a series of typical field trips, etc.
2. New instruction materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: A slide presentation of the entire project's activities.
2. Development of other materials anticipated: Several slide programs involving the plant and animal life at the Environmental Research Center.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 9.
2. Number of teachers having adopted all of the project materials: 32.
3. Number of teachers using some of the project material: Unknown.
4. Total number of students using project materials: 2120.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    - a. Bellows Falls Union High School, Bellows Falls, Vermont.
    - b. Bellows Falls Central School, School Street, Bellows Falls, Vermont.
    - c. Bellows Falls Middle School, School Street, Bellows Falls, Vermont.
    - d. Grafton School, Grafton, Vermont.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    - a. Workshops: No.
    - b. Summer Institute: No.
    - c. Evening classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Activities from the Southeastern Pennsylvania Outdoor Education Center Audubon Aids, Tips and Tricks in Outdoor Education, Regional Environmental Education Program, People and their Environment, Set of Peterson Field Guides.
6. Commercial availability of materials: Yes.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. The Title III Staff and Advisory Board for the State of Vermont.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

By May 1971, a field trip program was set up for grades 1-8. During this time approximately 1,000 students and 25 teachers were exposed to this type of education. In September 1971, courses were established in the high school in the field of conservation, ecology, and environmental studies. An Environmental Research Center was constructed at the high school which will house the facilities, materials, and apparatus for the project's activities.

P. PLANS FOR THE FUTURE:

More extensive in-service training for teachers, the possibility of a Summer program for students, the development of outdoor classrooms, the building of a wildlife habitat area and possibly an ecology pond.

A. PROJECT TITLE: COMMUNITY PLANNING - LOCAL GOVERNMENT - OUTDOOR EDUCATION PROGRAM

B. PROJECT DIRECTOR: William Pollock, Rochester, Vermont 05767.
(802)767-5861

C. PROJECT HEADQUARTERS:
1. Rochester High School, Rochester, Vermont 05767.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Regular High School Staff and guest specialists.

E. PROJECT HISTORY:
1. Principal originators: Joseph Steventon, Town Representative; James Edgerton, County Extension Service.
2. Date and place of Initiation: November 1970.
3. Overall purpose:
    a. Make students aware of community needs - problems, strengths.
    b. Make students and parents aware of environmental problems, legislation and conditions.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT HISTORY:
1. Objectives of the project: Same as E-3.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
Community suggestions by students to selectmen of three feeding towns.

I. MATERIALS AVAILABLE FREE:
Summary of program.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: Not applicable.
3. Number of teachers using some of the project materials: 5.
4. Total number of students using project materials: 40.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: Rochester High School, Rochester, Vermont.

M. TEACHER PREPARATION: None.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1970:
This program is offered alternate years to junior and senior high school students.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: (CONSERVATION EDUCATION)

B. PROJECT DIRECTOR: Frederick H. Mold, Fairbanks Museum, St. Johnsbury, Vermont 05819. (802)748-3413

C. PROJECT HEADQUARTERS:
1. Fairbanks Museum, St. Johnsbury, Vermont 05819.
2. Special facilities or activities available for visitor viewing: Yes. The museum.

D. PRINCIPAL STAFF: 4 persons employed full-time, one part-time.

E. PROJECT HISTORY:
1. Principal originators: Fairbanks Museum of Natural Science.
2. Date and place of Initiation: December 1890.
3. Overall purpose: Conservation education K-12, college and in-service.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Not applicable.

I. MATERIALS AVAILABLE FREE: Not applicable.

J. MATERIALS PURCHASABLE: Not applicable.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not applicable.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION:
Teachers and students come to the museum for instruction.

N. PROJECT EVALUATION: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
We teach science and conservation, inside and outside, for nine school districts - 25,000 children.

P. PLANS FOR THE FUTURE:
Same as now.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION PROGRAM - HARTFORD SCHOOL DISTRICT

B. PROJECT DIRECTOR: Robert D. Leister, Middle School, White River Junction, Vermont 05767. (802)295-7187

C. PROJECT HEADQUARTERS:
1. Middle School, White River Junction, Vermont 05767.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Present director, Superintendent of Schools, School Board.
2. Date and place of Initiation: September 1, 1971.
3. Overall purpose: To cause children to become environmentally aware, informed and motivated to act.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: Not answered.

H. MATERIALS PRODUCED:
Ferguson Series and many other individual titles.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: A lot here for local consumption.
2. Development of other materials anticipated: An outward bound project to get at motivation to act.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 6.
2. Number of teachers having adopted all of the project materials: Not applicable.
3. Number of teachers using some of the project materials: 50.
4. Total number of students using project materials: 1,900.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: This district only.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 5 days.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Began in the fall of 1971 to develop an approach to environmental education for K-12 in this district. This year has been one of development and trial with little publishable material. Methods have been sampled. Material samples badly hampered by lack of funds.

P. PLANS FOR THE FUTURE:

1. Detailing K-4 program a lot like Yarmouths.
2. Detailing 5-8 program - form still hard to see.
3. High School is area where least work has been done and reaching the students is the hardest.

A. PROJECT TITLE: VERMONT ENVIRONMENTAL CENTER, INC.

B. PROJECT DIRECTOR: Andrew P. Nelson, Vermont Environmental Center, Woodstock, Vermont 05091. (802)457-2885

C. PROJECT HEADQUARTERS:
1. Vermont Environmental Center, Woodstock, Vermont.05091.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 10 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Richard Brett, Woodstock, Vermont; Vermont Natural Resources Council, Montpelier, Vermont.
2. Date and place of Initiation: June 1970 - Ripton, Vermont.
3. Overall purpose: Development and implementation of a comprehensive program in environmental education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Primarily direct education aimed at teachers, school children and general public.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12: None.
3. Others:
   a. Analysis of commercially available environmental games.
   b. Bibliography.

I. MATERIALS AVAILABLE FREE:
1. Environmental games.
2. Library holdings.
3. Current informational and promotional materials.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Additional bibliography.
2. Development of other materials anticipated: Analysis of educational programs given by the center.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION:
1. Consultant service available for teachers using the materials: Not applicable.
2. In-service education program for teachers using the materials: Not applicable.

3. Pre-service training program for teachers desiring to use the materials: Not applicable.

4. Kinds of teacher preparation programs available:
   - a. Workshops: Yes. Various times.
   - b. Summer Institute: Yes. 10 days.
   - c. Evening classes: No.
   - d. Others: College courses in conjunction with Middlebury College.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Library holdings - our library is open for use, but is not a lending library.

6. Commercial availability of materials: Not applicable.

N. PROJECT EVALUATION: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:
The Center will be re-organized during the coming year. Meanwhile, all activities to date will be analyzed and evaluated for a report to be published late in 1972.

A. PROJECT TITLE: PROGRAM FOR THE GIFTED - ESEA TITLE III PROJECT

B. PROJECT DIRECTOR: Nedra I. Harkavy, 1306 Thomas Street, Hampton, Virginia 23369. (703)722-5958

C. PROJECT HEADQUARTERS:
1. Bethel High School, 1067 Big Bethel Road, Hampton, Virginia 23366.
2. Special facilities or activities available for visitor viewing: Yes. Summer program.

D. PRINCIPAL STAFF: 8 persons employed. Director and secretary - full time. Teaching staff employed for summer activities.

E. PROJECT HISTORY:
1. Principal originators: Instructional Administrative Staff.
2. Date and place of Initiation: June 1971. Bethel High School.
3. Overall project purpose: The Program for the Gifted offers students who have excellent potential the opportunity to pursue their interests and develop their abilities in a depth not possible in a regular school curriculum.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: This project was submitted by the Hampton City School System to provide enrichment for gifted students in the Tidewater Peninsula area. Innovative programs in the areas of creative communications and environmental science were proposed in order to supplement classroom activities.

The Title III Program proposal included two six-week instructional and participation sessions, one in environmental science and one in creative communications. Students participating in the program would be provided opportunities to pursue their interests and develop their abilities by means of sophisticated learning equipment. With the assistance of consultants specializing in creative communications and environmental science, the students would develop new ideas and techniques and would share their knowledge with other students. Thus would supplementary instruction be strengthened and expanded.

2. New instructional materials being produced: Yes. The Aerospace Science phase will be eliminated and concentration will be on the Environmental approach to better balance the classical mechanics aspect of the program.

H. MATERIALS PRODUCED:
Teaching materials used are chosen with a view to acquainting pupils with the latest developments in the field of their specialty and to provide experiences of associating with their peers. NASA has offered the use of its array of the latest scientific equipment and laboratory facilities for research participation projects involving the students and staff. We have garnered a vast amount of materials from the Environmental Protection Agency, Research Triangle Park, N. C.

I. MATERIALS AVAILABLE FREE: Brochure.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed:
    a. Slide Tape Presentation.
    b. 8mm and TV Documentaries.

2. Development of other materials anticipated: Course of Study in Environmental Science.

L. PROJECT IMPLEMENTATION:

Emphasis is on providing gifted students with an opportunity to develop their talents through association with other students under the guidance of the director and participating teachers.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 day.
    b. Summer Institute: Yes. 6 weeks - for students only.
    c. Evening classes: No.
    d. Others: Enrichment classes are held after school and on weekends. Time periods vary. Field trips enable students to participate in various activities throughout the state.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. Supervisors of content area permit us to use all materials available to them.

6. Commercial availability of materials: Not applicable.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. The United States Office of Education and the Virginia Department of Education.

2. Pertinent published research studies: Not applicable.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Our program emphasis was geared to the interests and special talents of our Identified Gifted Students. The participants had extended laboratory sessions, attended lectures, and enjoyed various field trips. The summer session provided background and stimulation for students to develop individual projects.

During the year a "Buddy System" was established which paired the active high school participants with younger talented students outside of school time during the regular school year.

In our year round program there were several benefits derived from the "Buddy System." This system made possible the mutual reinforcement of goals through the dovetailing of instruction. It allowed greater specialization and it encouraged other students to share their specialties. We have tried to establish rapport between the older and younger students during the teaching and/or assistance efforts. We have secured the services of qualified consultants in planning seminars for students with special abilities. Instruction in various areas has been available in small groups and on an individual basis.

As a result of adequate dissemination of the program aims and goals at the elementary level, teachers and principals searched their school roster for children who could meet the relatively high standards for admission to the program. When recommendations were made, the director interviewed the children, interested parents, teachers and principals.

After completing the above stages, additional teaching material and enrichment programs were outlined and provided the classroom teacher for further follow-up.

Supervisors have been invited and encouraged to observe the program and assist whenever possible. Follow-up contact has been made with teachers and students, and regular meetings are held in order to keep in touch with the students and share the year's experiences. The director and teaching staff supervised the development of individual projects, which was presented at a Spring Conference, March 21, 1972.

P. PLANS FOR THE FUTURE:

1. Creative Communications:
    a. The Strolling Players (play) will be presented at elementary schools during the 1972-73 school year.
    b. The Strolling Players will be taped and filmed at WHRO (Education T.V.), and tape will be purchased for future use.
    c. Students will continue and complete small group and individual projects - themographic essays, short stories, poems, films, slide series, photography collages, and television tapes.
2. Environmental Science: Students will develop an individual project during the year.

A. PROJECT TITLE: NATURAL RESOURCES MANAGEMENT

B. PROJECT DIRECTOR: Mr. J. D. Puckett, William Campbell High School, Naruna, Virginia 24576. (703)376-2015

C. PROJECT HEADQUARTERS:
  1. William Campbell High School, Naruna, Virginia 24576.
  2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: Staff is employed as regular teachers.

E. PROJECT HISTORY:
  1. Principal originators: Vocational Agriculture Department, William Campbell High School.
  2. Date and place of Initiation: 1968 - Naruna, Virginia.
  3. Overall purpose: Provide practical experience in conservation and forestry.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT HISTORY:
  1. Objectives of the project: To give students experience in practical ways of improving the forest and conserving natural resources.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: "CARE" - CONSERVATION AND RECREATION EXPLORATION

B. PROJECT DIRECTOR: Walton F. Mitchell, Jr., P.O. Box 245, New Castle, Virginia 24127. (703)864-5191

C. PROJECT HEADQUARTERS:
1. P.O. Box 245, New Castle, Virginia 24127.
2. Special facilities or activities available for visitor viewing: Yes. Facilities that have been erected by work study groups are available to be shown.

D. PRINCIPAL STAFF: Four full time persons, one part time person.

E. PROJECT HISTORY:
1. Principal originators: W. B. Watkin, Superintendent of Schools; Walton F. Mitchell, Jr., Director of Federal Programs; Jack Bostic, Curriculum Specialist.
2. Date and place of Initiation: December 1969. Richmond, Virginia to State Title III people.
3. Overall project purpose:
   a. To expand the vocational offerings of a small rural school.
   b. To provide wholesome facilities for recreational development.
   c. To build an outdoor classroom where environmental studies can take place.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: The provision of coordinated, vocational, recreation, and conservation education opportunities for students and adults in a somewhat isolated, low population density, rural area.
2. New instructional materials being produced: Yes. Grades 1-10.

H. MATERIALS PRODUCED: Tentative guides for the inclusion of outdoor conservation studies in the existing science program.

I. MATERIALS AVAILABLE FREE: Brochures at present, other material being developed.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: 3 slide tape programs.
2. Development of other materials anticipated: Curriculum materials.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 3.
2. Number of teachers having adopted all of the project materials: 14.

3. Number of teachers using some of the project material: 18.
4. Total number of students using project materials: 600.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. McCleary Elementary School, New Castle, Virginia 24127.
    b. Maywood Elementary School, New Castle, Virginia 24127.
    c. New Castle High School, New Castle, Virginia 24127.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 week - 4 hours per day.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: In-service after school.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Our project was funded in July 1970. During the first year our primary activities were to construct a facility where environmental studies could be taught. The participants were introduced to the various vocational subject areas such as carpentry, masonry, plumbing and electrical wiring. They have constructed a swimming pool, bath house and four cabins to date. During the 1971-72 school year, nature trails of various kinds have been established and students of Craig County have had access to them. A curriculum to utilize the various aspects of the project site has been written.

P. PLANS FOR THE FUTURE:

Additional facilities are being constructed now. A long multi-purpose building and additional cabins will be completed by July 1973. We plan to develop an educational "self-guide" pamphlet about the nature site and what can be learned there.

A. PROJECT TITLE: THE DEVELOPMENT AND FIELD TESTING OF A PILOT PROGRAM IN ENVIRONMENTAL EDUCATION IN THE SEDRO-WOOLLEY SCHOOL DISTRICT

B. PROJECT DIRECTOR: John C. Miles, 230 Pacific Highway, Bellingham, Washington 98225. (206)734-4978

C. PROJECT HEADQUARTERS:
1. Huxley College of Environmental Studies, Bellingham, Washington 98225.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: Two full time persons. Students of the college also work on project activities, some of whom are reimbursed, some of whom are not.

E. PROJECT HISTORY:
1. Principal originators: William Stocklin, Lee Mann, John Miles.
2. Date and place of Initiation: September 1970. Sedro-Woolley.
3. Overall project purpose: The purpose is to explore the meaning and form of environmental education at the school district and regional levels. Based on the assumption that the teacher is the critical change agent in schools, a teacher-training program is developed in the project district (Sedro-Woolley) and is then applied to teacher groups throughout the northwest Washington region. The retrained teachers revise their curricula toward environmental education. The combined revisions of many teachers over a period of years is one working definition of environmental education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
    - a. To define environmental education and to identify its qualities.
    - b. To design a school district staff improvement and development program in environmental education.
    - c. To develop curriculum packages for environmental education at all grade levels and in all disciplines, building into these packages the qualities of environmental education.
    - d. To develop ways and means of evolving a community commitment to environmental education.

2. New instructional materials being produced: Yes. All grade levels.

H. MATERIALS PRODUCED:
1. K-6: Learning packages - Sedro-Woolley Project Reports.
    - a. #1 "A 'Save Our Trees' Project," L. Lundgren (primary).
    - b. #7 "An Environmentally Related Program for the First Grade," A. Shafer.

c. #8 "A Year-Long Environmental Project," G. Abrahamson (primary).
d. #2 "A Study of Patterns and Tree Succession as Environmental Education," S. Floyd (primary).
e. #9 "An Approach to Environmental Education: A Three-Stage Program," K. Taylor (intermediate).
f. #10 "Developing Environmental Awareness in a Fifth-Grade Class of 'Below-Average' Achievement Level," D. Hillier.
g. #13 "An Interdisciplinary Program Incorporating Population Studies," E. Jungblom (intermediate).
h. #14 "An Environmentally Related Program for the Sixth Grade," B. Crippen (intermediate).

2. 7-12:
   a. #3 "An Environmental Approach to Eight-Grade Science," H. Sargo.
   b. #5 "The Project Physics Course, Modularized," W. Flint (grades 10-12).
   c. #6 "Investigating Environmental Problems in a High-School Biology Course," W. Reinard.
   d. #11 "An Environmental Approach to Art," L. Trueman (grades 7-8-9).
3. Others:
   a. #4 "The Role of the Library in Environmental Education," H. Armstrong.
   b. #12 "Applications of Media for Environmental Education in the School," P. Ellis and S. Giordano.

I. MATERIALS AVAILABLE FREE: Limited copies of all materials are available free of charge.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: We anticipate many new materials and learning packages, as new teachers become involved in the project, but cannot specify what these will be.
2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: Not answered.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: 30.
4. Total number of students using project materials: 500.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. Sedro-Woolley High School, Sedro-Woolley, Washington.
   b. Lucille Umbarger School, Burlington, Washington.
   c. Cascade Junior High School, Sedro-Woolley, Washington.
   d. Central Elementary School, Sedro-Woolley, Washington.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 3 days to 10 weeks.
    b. Summer Institute: Yes. 6 weeks.
    c. Evening classes: Yes. 10 meetings, 3 hours each.
    d. Others: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. "The Development and Field Testing of a Pilot Program in Environmental Education in the Sedre-Woolley School District," Final Report, Project No. 0-0848, Grant No. OEG-0-70-5039, to U.S. Dept. of HEW, Office of Education.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: No.
2. Pertinent published research studies: Not answered.
3. Unpublished research: "Evaluation of Environmental Education in the Sedro-Woolley School District," Patricia W. and Clifford E. Lunneborg, U. Washington Testing Bureau.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Sept. 1970. Project began.
2. Oct. 1970 through March 1971. Teacher-training program developed and tested.
3. March 1971 through May 1971. Teachers develop learning packages.
4. June 1971 through Aug 1971. Summer Institute for teachers, Huxley College of Environmental Studies.
5. Sept 1971 through Dec. 1971. Preservice teacher-training course; in-service teacher-training course (in Burlington, Wash.)
6. Dec. 1971. Preliminary learning packages published.

P. PLANS FOR THE FUTURE:

The project will include in-service teacher training programs throughout the Northwest Washington Region, each of which will generate more environmental education learning packages. The pre-service program will continue to be developed. The learning packages will ultimately be refined and compiled in a multidisciplinary environmental education curriculum.

A. PROJECT TITLE: MARSHALL OUTDOOR LABORATORY

B. PROJECT DIRECTOR: John McAdam, Environmental Education Consultant, 3800 196th S.W., Lynnwood, Washington 98036. (206)PR4-2658

C. PROJECT HEADQUARTERS:
   1. 3800 196th S.W., Lynnwood, Washington 98036.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 person employed full-time.

E. PROJECT HISTORY:
   1. Principal originators: Edmonds PTA Council.
   2. Date and place of Initiation: Fall, 1966.
   3. Overall project purpose:
      a. For students to observe the scientific sequence and order of nature in our lives.
      b. To preserve a natural site to be used as a study area.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. Environmental awareness.
      b. Environmental decision making.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
   1. K-6: Marshall Outdoor Laboratory guide for grade 5.
   2. 7-12: None.
   3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: None.
   2. Development of other materials anticipated: Program materials for primary and secondary grades.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 15.
   2. Number of teachers having adopted all of the project materials: 20.
   3. Number of teachers using some of the project materials: 10.
   4. Total number of students using project materials: 900.
   5. Totals stated are estimated.
   6. Names and location of schools where the course is being taught:
      a. Cypress Elementary School, 21500 Cypress Way, Alderwood Manor, Washington 98036.

b. Meadowdale Elementary School, 6505 168th S.W., Edmonds, Washington 98020.
c. Mountlake Terrace Elementary School, 52nd W., Mountlake Terrace, Washington 98043.
d. Maple Park Elementary School, 180th S.W. and 64th W., Edmonds, Washington 98020.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes - 11 hours.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. PTA Council proposed the project in 1966.
2. District purchased in 1967.
3. Trails were established in 1968.
4. Program was written 1969.
5. Use of school children began in 1969.

P. PLANS FOR THE FUTURE:

Proposals will be submitted to extend the program into other grade levels and senior high disciplines.

A. PROJECT TITLE: CENTER FOR ENVIRONMENTAL STUDIES

B. PROJECT DIRECTOR: Fred Guenther, Asst. Supt., Mount Vernon School District No. 320, 1219 East Division, Mount Vernon, Washington 98273. (206)336-6114

C. PROJECT HEADQUARTERS:
1. 1219 E. Division, Mount Vernon, Washington 98273.
2. Special facilities or activities available for visitor viewing: Yes. The Center for Environmental Studies (a learning center in environmental studies), learning packages in environmental education being implemented in the classroom.

D. PRINCIPAL STAFF: Two full-time, three part-time. Additional involvement of 100 teachers, as Project participants.

E. PROJECT HISTORY:
1. Principal originators: Administrators and staff of Mount Vernon School District No. 320,
2. Date and place of Initiation: January 1, 1971.
3. Overall project purpose: To develop and test out a K-12 curriculum in environmental education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To train 100 teachers in writing and implementing in the classroom learning packages in environmental education.
   b. To produce and make available for dissemination a locally validated K-12 curriculum in environmental education, consisting of a sequence of learning activity packages.
   c. To establish and test a resource center for environmental education, grades K-12.
2. New instructional materials being produced: Yes, for grades K-12.

H. MATERIALS PRODUCED:
By May, 1973, the Project will have produced and tested a K-12 sequence of learning packages in environmental education. Additionally, the Project will have produced a scope and sequence chart, including objectives, activities, and necessary resources relative to the K-12 sequence.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE:
1. Environmental Norm Reference Achievement Test - Primary, Intermediate, Middle, and High School at cost.
2. After May, 1973: K-12 learning packages in environmental education at cost.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: Only this school district.
2. Number of teachers having adopted all of the project materials: Still in the developmental stage.
3. Number of teachers using some of the project material: Still in the developmental stage.
4. Total number of students using project materials: Still in the developmental stage.
5. Totals stated: Not applicable.
6. Names and locations of schools where the course is being taught: Not applicable.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. Time varies.
    b. Summer Institute: A possible product.
    c. Evening classes: A possible product.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION: In the process of being evaluated.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

At the completion of the 1971-72 in-service in June, 1972, Project personnel will select and assemble Learning Activity Packages representing a K-12 sequence in environmental education. Related Project products will be a scope and sequence chart listing principles, objectives, and learning activities by grade and subject areas, cross-referenced to appropriate LAP's.

P. PLANS FOR THE FUTURE:

During the remainder of the Project, the individual LAP's will be validated in the classroom, and LAP and sequence revisions will be made on the basis of the classroom trials.

A. PROJECT TITLE: CAMP WASKOWITZ OUTDOOR LABORATORY

B. PROJECT DIRECTOR: William B. Weppler, Route 1, Box 836, North Bend, Washington 98045. (206)888-0681

C. PROJECT HEADQUARTERS:
1. Route 1, Box 836, North Bend, Washington 98045.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: Four full time, seven part time.

E. PROJECT HISTORY:
1. Principal originator: Mr. Carl Jensen, Retired Superintendent of District.
2. Date and place of Initiation: 1948 Pack Forest Camp.
3. Overall project purpose: To provide an outdoor laboratory for the study of conservation.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. To enrich learning experiences in all areas of conservation.
   b. To provide experiences in social growth.
2. New instructional materials being produced: Yes, mainly 5th, 6th and secondary.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: Teacher leader booklet.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 34.
2. Number of teachers having adopted all of the project materials: 82.
3. Number of teachers using some of the project material: Unknown.
4. Total number of students using project materials: 2380.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
   a. North Hill Elementary, 19835 8th Street, Seattle, Washington 98048.
   b. Boulevard Park Elementary, 12833 20th Street, Seattle, Washington 98068.
   c. Marvista Elementary, 19800 Marine View Drive, Seattle, Washington 98066.
   d. Sunnydale Elementary, 15631 8th Street, Seattle, Washington 98068.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the material: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes (20 hours)
    b. Summer institute: No.
    c. Evening classes: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: No.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Traditionally taught activities for conservation education, i.e., Soils, Water, Plants, Animal, Forestry, Survival.

P. PLANS FOR THE FUTURE:

1. Construction of frontier fort.
2. Construction of Indian village.
3. Construction of pioneer homestead.
4. Construction of archeological 'dig'.

A. PROJECT TITLE: CISPUS ENVIRONMENTAL CENTER

B. PROJECT DIRECTOR: Lloyd Rowley, Cispus Environmental Center, Route 4, Randle, Washington 98377. (206)497-7131

C. PROJECT HEADQUARTERS:
1. Route 4, Randle, Washington 98377.
2. Special facilities or activities available for visitor viewing: Library, outdoor living room, animal room, herbarium in process of being developed.

D. PRINCIPAL STAFF: 1 director, 1 secretary, 2 maintenance men, 1 cook, all full time, and 1 Environmental Education Consultant provided by the U.S. Forest Service.

E. PROJECT HISTORY:
1. Principal originator: Mr. Louis Bruno, Superintendent of Public Instruction.
2. Date and place of Initiation: June 22, 1970, Randle, Wash.
3. Overall project purpose: The overall purpose of the project is to utilize this facility which is located on $1\frac{1}{4}$ million acres in the Gifford Pinchot National Forest and is a developmental environmental education learning site for use by student groups of all ages beginning with kindergarten youngsters through teacher training and adult groups. The office of Superintendent of Public Instruction works with each group to develop their special objectives to meet their needs in environmental education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: We are in the initial stages of working with Central Washington State College in developing a herbarium and related materials.

H. MATERIALS PRODUCED: Not applicable.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
Survival information may be purchased direct from Gene Fear, P.O. Box 696, Tacoma, Washington 98401, or from Dan Fear, 1619 East Wright, Tacoma, Washington 98404.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: Flora and fauna leaflets are being prepared with the assistance of Central Washington State College.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: All schools.

2. Number of teachers having adopted all of the project materials: Questionable.

3. Number of teachers using some of the project material: 230.

4. Total number of students using project materials: 44,740.

5. Totals stated in 1,2, and 3 are estimated; total stated in 4 is definite.

6. Names and locations of schools where the course is being taught: Not applicable.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:
    a. Workshops: Yes (1 day to 2 weeks)
    b. Summer institute: Yes (1 day to 2 weeks)
    c. Evening classes: No.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not applicable.

6. Commercial availability of materials: Not applicable.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Not applicable.

2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not applicable.

P. PLANS FOR THE FUTURE: Continued use by user groups.

A. PROJECT TITLE: OUTDOOR EDUCATION PROJECT - with Kanawha County Schools
MAJOR ENVIRONMENTAL EXHIBIT
NATURE INTERPRETATION - using Nature Trail
IN-SERVICE TRAINING FOR TEACHERS
AWARDS - Incentive program for schools.

B. PROJECT DIRECTOR: Eloise McElfresh, Mrs. Richard S. Glaser, Children's Museum and Planetarium, 746 Myrtle Road, Charleston, West Virginia 25314. (304)344-8035

C. PROJECT HEADQUARTERS:
1. Same as B.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 14 persons used in project operation.

E. PROJECT HISTORY:
1. Principal originators: Museum-School cooperation.
2. Date and place of Initiation: 1970.
3. Overall purpose: All are designed to create and promote an environmental ethic, to encourage creative problem-solving through awareness, understanding and appreciation - resulting in action programs.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None as yet.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Written materials.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION: Not answered.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE:
Development of written materials.

A. PROJECT TITLE: (OUTDOOR AND ENVIRONMENTAL EDUCATION)

B. PROJECT DIRECTOR: Howard Dugan, 121 East High Street, Kingwood, West Virginia 26537. (304)329-0748

C. PROJECT HEADQUARTERS:
   1. 121 East High Street, Kingwood, West Virginia 26537.
   2. Special facilities or activities available for visitor viewing: Yes. During the outdoor education session, 1972, slides and a 35mm film of outdoor activities were made.

D. PRINCIPAL STAFF: 16 persons were full time for two weeks at Camp O.O.E. and 18 persons were full time for four weeks at Camp DAVE.

E. PROJECT HISTORY:
   1. Principal originators: Title I Director, Harlan Myers; County Superintendent, Lawrence Losh; and other personnel of the county school staff.
   2. Date and place of Initiation: July, 1967 - 4-H Camp site, Preston County.
   3. Overall project purpose: The overall purpose is to provide cultural and educational experiences in outdoor and environmental education for 130 disadvantaged youngsters in grades seven, eight, and nine and 250 disadvantaged youngsters in grades four, five, and six in a summer camp setting - approximately 60 children participating in each five day encampment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. Become orientated to outdoor activities by participating in living, doing, and learning in an outdoor laboratory.
      b. Develop recreational and physical fitness skills for present and future pleasure, enjoyment, and health.
      c. Visit and observe surrounding areas. See evidence of environmental problems (soil erosion, strip mining, pool and stream pollution, and waste disposal dumps).
   2. New instructional materials being produced: None.

H. MATERIALS PRODUCED: Not answered.

I. MATERIALS AVAILABLE FREE: Not answered.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION: Not answered.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Not answered.
2. In-service education program for teachers using the materials: Not answered.
3. Pre-service training program for teachers desiring to use the materials: Not answered.
4. Kinds of teacher preparation programs available:
    - a. Workshop: Yes. Four days prior to opening of the program.
    - b. Summer Institute: Not answered.
    - c. Evening classes: Not answered.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not answered.
6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: No.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: ENVIRONMENTAL AWARENESS

B. PROJECT DIRECTOR: Mr. John D. Myers, Preston County Board of Education, Kingwood, West Virginia 26537. (304)329-0580

C. PROJECT HEADQUARTERS:
  1. Preston County Board of Education, Kingwood, West Virginia 26537.
  2. Special facilities or activities available for visitor viewing: Yes. Shrout's Arboretum.

D. PRINCIPAL STAFF: Three persons employed full time.

E. PROJECT HISTORY:
  1. Principal originators: Harry Hobbs, U.S. Ranger, John D. Myers, Gary Warnick, Jerry Cline.
  2. Date and place of Initiation: Planning stage.
  3. Overall project purpose: To make students more aware of how the different components of our environment are related.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Attempt to emphasize that when one segment of environment is disturbed or distorted that it directly or indirectly has effect on other segments.
    b. Through this approach, we will attempt to involve our program in the areas of history, science, geography, mathematics, music, art, etc.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Films and slides are being developed as the project progresses.

L. PROJECT IMPLEMENTATION: In the planning stage.

M. TEACHER PREPARATION:
  1. Consultative service available for teachers using the materials: No.
  2. In-service education program for teachers using the materials: No.
  3. Pre-service training program for teachers desiring to use the materials: Planning.
  4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 3 days.
    b. Summer Institute: No.
    c. Evening classes: No.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: Yes.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: No.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Additional activities are being planned.

A. PROJECT TITLE: NATURE EDUCATION DEPARTMENT, OGLEBAY INSTITUTE
(Brooks Nature Center)

B. PROJECT DIRECTOR: John S. Christie, Oglebay Institute, Wheeling, West Virginia 26003. (304)242-6855

C. PROJECT HEADQUARTERS:
1. Oglebay Institute, Oglebay Park, Wheeling, West Virginia 26003.
2. Special facilities or activities available for visitor viewing: Yes. Displays, nature walks, and nature library.

D. PRINCIPAL STAFF: 3 persons regularly employed, many part-time.

E. PROJECT HISTORY;
1. Principal originators: Oglebay Park Activities Committee/A.B. Brooks.
2. Date and place of Initiation: 1928 - Oglebay Park.
3. Overall project purpose:
   a. To develop an environmental ethic; to develop in man the attitues, understandings and appreciation of his natural surroundings such that he can and will live harmoniously with nature.
   b. To fulfill the general aims and objectives of Oglebay Institute.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: Objectives included in program purpose.
2. New instructional materials being produced: Yes. K-adult.

H. MATERIALS PRODUCED:
1. K-6:
   a. Pioneer Study.
   b. Resident Environmental Education Project (R.E.E.P.) - 2 yrs.
   c. Pond and Stream Life.
   d. Soil Study.
   e. Single Tree Concept.
   f. Map and Compass.
   g. More being developed.
2. 7-12: None.
3. Others:
   a. Nature bulletins.
   b. Teacher resource materials.

I. MATERIALS AVAILABLE FREE:
Many materials are given out at teacher workshops.

J. MATERIALS PURCHASABLE:
1. 49 nature bulletins - range from "How to Build Bird Houses" to information of a specific animal (such as bears, cardinals, etc.) - 10¢ each or in bulk orders of 10 or more, 5¢ each.
2. Ferns and Fern Allies of the Northern Panhandle of W. Va. - 25¢.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Program outline for all camps.
2. Master plan for all camps.
3. Lesson plans for R.E.E.P.
4. Teacher preparation materials for field trips to Nature Center.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: Unknown.
2. Number of teachers having adopted all of the project materials: Unknown.
3. Number of teachers using some of the project materials: Unknown.
4. Total number of students using project materials: 4,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
    a. Tridelphia Elementary School (R.E.E.P.), National Road, Tridelphia, West Virginia 26059.
    b. Fulton Elementary School, 5 Bank Street, Wheeling, West Virginia 26003.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. ½ to a full day.
    b. Summer Institute: Yes. Terra Alta Nature Leaders Camp - 2 weeks. Three hours undergraduate course - "Methods in Environmental Education" - 4 weeks (in cooperation with Bethany College).
    c. Evening classes: Yes. Workshops, astronomy night activities.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: We give out materials at workshops where we train leaders to use them.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Three weeks of R.E.E.P. for grade 6 of some Ohio County, West Virginia, schools.
2. Two-week adult nature camp each summer (16 and above).
3. Two-week junior nature camp each summer (10-16).
4. 8-10 statewide teacher workshops yearly.
5. One-week high school ecology camp (14-18).

P. PLANS FOR THE FUTURE: All included in the Master Plan.

A. PROJECT TITLE: ENVIRONMENTAL EDUCATION

B. PROJECT DIRECTOR: Allen F. Christel, Superintendent, Cameron Public Schools, Cameron, Wisconsin 54822. (715)458-2210

C. PROJECT HEADQUARTERS:
1. Cameron Public Schools, Cameron, Wisconsin 54822.
2. Special facilities or activities available for visitor viewing: We are developing a resource area for staff and a pond.

D. PRINCIPAL STAFF: Not answered.

E. PROJECT HISTORY:
1. Principal originators: Mrs. Bronson, Mrs. Kohel, Mrs. King.
2. Date and place of Initiation: August 1971.
3. Overall project purpose: Introduce a K-6 Environmental Education Curriculum outline.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To establish a K-12 Environmental Education program for the Cameron Public Schools.
2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
1. K-6: 1-6 Curriculum Guide.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
1-6 Curriculum Guide - $3.00 plus postage.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: Not answered.
2. Number of teachers having adopted all of the project materials: 20.
3. Number of teachers using some of the project materials: 25.
4. Total number of students using project materials: 700.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Cameron Public Schools, Cameron, Wisconsin 54822.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1 day.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
The project is new this year.

P. PLANS FOR THE FUTURE:
1. K-12 Curriculum.
2. Study Area - Pond, etc.
3. Additional A-V materials on Ecology.

A. PROJECT TITLE: OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Neil Coaty, Downtown Elementary School, Chetek, Wisconsin 54728. (715)924-3136

C. PROJECT HEADQUARTERS:
1. Downtown Elementary School, Chetek, Wisconsin 54728.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 7 persons employed by the school district.

E. PROJECT HISTORY:
1. Principal originators: Mr. Robert Crase, Superintendent of Schools; Mr. Neil Coaty, Teacher and Elementary Principal.
2. Date and place of Initiation: 1969 - Chetek Elementary School.
3. Overall purpose:
   a. To show the relationship between man and soil, trees, and nature in general.
   b. To utilize the setting for the establishing of a climate for the practice of psychological principles of teaching as they pertain to the development of knowledges and practices.
   c. To develop a basic respect for the right of self and others.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: To develop specific skills which will enrich, vitalize and complement content areas of the school curriculum by means of firsthand observation and direct experience outside the classroom.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE:
Outdoor Education Guide which we use in the 6th grade encampment.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
Several slides of various activities at camp.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 6.
2. Number of teachers having adopted all of the project materials: Only the teachers in Chetek - grade 6.
3. Number of teachers using some of the project materials: Same as No. 2.
4. Total number of students using project materials: 102 students in last encampment.
5. Totals stated are definite.

6. Names and locations of selected schools where the course is being taught: Downtown Elementary School, Chetek, Wisconsin; Ladysmith Elementary School, Ladysmith, Wisconsin. (Each of us has our own outdoor education program.)

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: Yes. A planning - group discussion time.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: No.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: After school - about one hour. Teachers choose the area of the outdoor curriculum they feel most secure in and work in groups to prepare their outdoor education classclasses.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

Only by students, teachers and parents.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Forest management, plant and tree identification class.
2. Classes in water pollution, fire control, physical education, gun safety, music, outdoor art, field arithmetic, soil conservation, game management and campfire.

P. PLANS FOR THE FUTURE:

Possibility of additional activities planned.

A. PROJECT TITLE: K-12 ENVIRONMENTAL EDUCATION PROGRAM

B. PROJECT DIRECTOR: A. L. Block, Director of Instruction, Franklin Public Schools, 7380 S. North Cape Road, Franklin, Wisconsin 53132. (414)425-2554

C. PROJECT HEADQUARTERS:
1. 7380 S. North Cape Road, Franklin, Wisconsin 53132.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: Staff includes only regular teachers and administrative personnel.

E. PROJECT HISTORY:
1. Principal originators: A. L. Block, Director of Instruction; R. Pladies, Science teacher, Forest Park Middle School; K. Wegerbauer, Principal; L. DeBack, Science Department Coordinator, Forest Park Schools.
2. Date and place of Initiation: September, 1971.
3. Overall project purpose: To provide an effective K-12 Environmental Education for all students in grades K-12, School District #5, Franklin, as well as visiting students from neighboring communities.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. Provide effective program development guidelines for teachers in grades K-12 in planning and implementing Environmental Education Programs.
   b. Provide the physical facilities--indoor and outdoor--needed for an effective Environmental Education Program.
2. New instructional materials being produced: Yes. Kindergarten through adult materials--field guides and related materials--are being prepared for use in the Forest Park Environmental Education Center. Also included are materials for teacher re-training.

H. MATERIALS PRODUCED:
1. K-6: Franklin Schools' Environmental Education Center: Elementary Middle School Field and Trail Guide.
2. 7-12: Franklin Schools' Environmental Education Center: High School--Adult Field and Trail Guide.
3. Others: Franklin Public Schools' K-12 Environmental Education Program.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
Franklin Public Schools K-12 Environmental Education Program (short form). $2.00. Contact A. L. Block, Director of Instruction, School District #5, 7380 S. North Cape Road, Franklin, Wis. 53132.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: Field guides are being taped for use with Casette players.
2. Development of other materials anticipated: Sound/slide program for use in Environmental Education.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 6.
2. Number of teachers having adopted all of the project materials: 150.
3. Number of teachers using some of the project materials: 150+.
4. Total number of students using project materials: 3,000+.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
   a. Forest Park Middle School, 8225 W. Forest Hill Avenue, Franklin, Wisconsin 53132.
   b. Country Dale School, 7380 S. North Cape Road, Franklin, Wisconsin 53132.
   c. Ben Franklin Elementary School, 8050 S. 76th Street, Franklin, Wisconsin 53132.
   d. Pleasant View Elementary School, 4601 W. Marquette Avenue, Franklin, Wisconsin 53132.
   e. Robinwood School, 10700 W. Church Street, Franklin, Wisconsin 53132.
   f. Franklin High School, 8222 South 51 Street, Franklin, Wisconsin 53132.

M. TEACHER PREPARATION: None.

N. PROJECT EVALUATION:
1. Has the effectiveness of the materials been evaluated: Yes. Informal evaluation to date.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Developed Forest Park Environmental Education Center.

P. PLANS FOR THE FUTURE:
Expand outdoor classroom facilities. Expand Environmental Education Instructional Media Center.

A. PROJECT TITLE: I-C-E (Instruction-Curriculum-Environment)

B. PROJECT DIRECTOR: Robert J. Warpinski, 1927 Main Street, Green Bay, Wisconsin 54301. (414)432-4338

C. PROJECT HEADQUARTERS:
   1. 1927 Main Street, Green Bay, Wisconsin 54301.
   2. Special facilities or activities available for visitor viewing: Yes. Project resource center serving area schools.

D. PRINCIPAL STAFF: 3 persons regularly employed, 2 persons part-time.

E. PROJECT HISTORY:
   1. Principal originators:
      a. Wisconsin Department of Public Instruction - Title III.
      b. Area "B" Policy Advisory Board.
      c. Four member committee to assess need and prepare proposal.
   2. Date and place of Initiation: August 1, 1970.
   3. Overall project purpose: To improve instruction and curriculum, using environmental education as a vehicle.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. Development of a supplementary EE guide, K-12, for all discipline areas.
      b. Develop and maintain an EE Resource Center.
      c. Community resource development and support.
   2. New instructional materials being produced: Yes. Supplementary Guides - all subject areas, K-12.

H. MATERIALS PRODUCED:
   1. K-6: Supplementary EE Guides:
      a. K-6 Language Arts.
      b. K-6 Social Studies.
      c. K-6 Science.
   2. 7-12: Supplementary EE Guides.
      a. 7-12 Language Arts.
      b. 7-12 Social Studies.
      c. 7-12 Science.
   3. Others:
      a. Twelve Major Concept Categories-Their Rationale (for teachers).
      b. Environmental Concern Inventory for K-4, 5-8, 9-12.

I. MATERIALS AVAILABLE FREE: Project brochure.

J. MATERIALS PURCHASABLE:
   Language Arts, Social Studies, Science EE Guides, K-12, in a series of 39 booklets - $5.00 for the set.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: Task of current project year is the development of similar EE Guides, K-12, for Mathematics, Fine Arts, Physical Education; 7-12, Home Economics, Industrial Arts; 9-12, Business Education and Agriculture.

2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: Guides have been distributed to 53 school districts and 124 non-public school in the area.

2. Number of teachers having adopted all of the project materials: Unknown.

3. Number of teachers using some of the project materials: 3,000-4,000.

4. Total number of students using project materials: Unknown.

5. Totals stated are estimated.

6. Names and locations of schools where the course is being taught: Pilot Schools are:

   a. St. Martin Lutheran School, Clintonville, Wisconsin.
   b. Gillett Public Schools, Gillett, Wisconsin.
   c. Cathedral Catholic School, Green Bay, Wisconsin.
   d. Menasha Public Schools, Menasha, Wisconsin.
   e. White Lake Public Schools, White Lake, Wisconsin.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.

2. In-service education program for teachers using the materials: Yes.

3. Pre-service training program for teachers desiring to use the materials: Yes.

4. Kinds of teacher preparation programs available:

   a. Workshops: No.
   b. Summer Institute: Yes. 3 weeks.
   c. Evening classes: None.
   d. Others: Teacher committee for guide development - 10 work sessions, 2-3 hours each, evenings.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

Title III state coordinator evaluation. Main project objectives were achieved the first two years of operation.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. October 1969 - Planning grant.
2. July 1970 - Operational Proposal effective.
3. January - May 1971 - Teacher committee work.
4. June 1971 - Second year continuation proposal accepted.
5. July 1971 - Summer institute to complete guide development.
6. Implementation of activities used in pilot areas.

P. PLANS FOR THE FUTURE:

1. Guide development and revision where necessary.
2. Continued resource center development.
3. Emphasis on community support and resources.
4. Third year continuation proposal accepted, funded as of June 1972. Emphasis on change agent role, teacher development, and implementation strategies.

A. PROJECT TITLE: K-12 ENVIRONMENTAL EDUCATION PROGRAM

B. PROJECT DIRECTOR: Marvin F. Meissen, Madison Public Schools, 545 W. Dayton Street, Madison, Wisconsin 53703. (608)257-9561

C. PROJECT HEADQUARTERS:
   1. Madison Public Schools, 545 West Dayton Street, Madison, Wisconsin 53703.
   2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: Approximately 30 persons are employed part-time.

E. PROJECT OBJECTIVES:
   1. Principal originators: Mr. Paul Olson, Madison School Forest; Mrs. Mary Lou Peterson, Local Productions; Mr. David Archbald, Information System; Mr. Charles Sommers, Eco-Action.
   2. Date and place of Initiation: 1969.
   3. Overall purpose:
      a. To improve environmental education K-12 in the Madison Public Schools.
      b. Effectively utilize community resources in this program.

F. PRESENT COMMERCIAL AFFILIATIONS: Yes.

G. PROJECT OBJECTIVES:
   1. Objectives of the project:
      a. To provide facilities, guidelines and resources for an effective environmental program.
      b. To assure participation of students at all levels in a meaningful experience.
      c. To systematically use resources available for the program.
   2. New instructional materials being produced: Yes. 6-8 grades.

H. MATERIALS PRODUCED:
   1. K-6:
      a. Guide to Environment Education: Conservation of Natural Resources.
      b. Looking Closely.
      c. Madison School Forest (Three Layers of Green).
      d. Cherokee Outdoor Education Area.
   2. 7-12:
      a. Geology of Wisconsin.
      b. Towns and Townships.
      c. Sandstones and Buffalo Robes.
      d. Glacial Geology of Wisconsin.
      e. Interdisciplinary Science and Social Studies.
      f. Ecology Action Program.
      g. Science and Society.
   3. Others: Film strips to accompany - available from SUE.

I. MATERIALS AVAILABLE FREE:
   Brochure of "Using Local Materials in the Classroom".

J. MATERIALS PURCHASABLE:

Materials can be purchased from the Madison Curriculum Department, Room 209, Administration Building, Madison Public Schools, 545 West Dayton Street, Madison, Wisconsin.

K. ADDITIONAL MATERIALS BEING DEVELOPED:

1. Other materials currently being developed: None.
2. Development of other materials anticipated: Audio-visual materials to accompany units on land use.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 33.
2. Number of teachers having adopted all of the project materials: 300.
3. Number of teachers using some of the project materials: 600.
4. Total number of students using project materials: 8,500.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught:
    a. Memorial High School, 201 S. Crammon Road, Madison, Wisconsin.
    b. Sennett Middle School, 502 Pflaum Road, Madison, Wisconsin 53716.
    c. Elvehjiem Elementary School, 5106 Hiademy Drive, Madison, Wisconsin 53716.
    d. Gompers Elementary School, 1402 Wyoming Way, Madison, Wisconsin 53704.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. ½ day.
    b. Summer Institute: Yes. 10 days.
    c. Evening classes: Yes. 15 sessions.
    d. Others: Vocation School (MATC), offers courses "Reading the Landscape" each year. Approximately 200 enroll.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Mrs. Mary Lou Peterson, local materials in cooperation with University of Wisconsin.
2. Pertinent published research studies: None published.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The efforts have been to:

1. Develop materials for use by classroom teachers.

2. Develop strategies to involve students in issues for study.
3. Utilize community resources.
4. 1969 - Guide publication, Science and Society; Environment Guide.
5. 1970 - Committee Eco Action; workshops.
6. 1971 - Satellite Laboratories with parks department; in-service sessions.
7. 1972 - Development of outdoor areas.

P. PLANS FOR THE FUTURE:
Summer school program in Ecology and Government.

A. PROJECT TITLE: ENVIRONMENTAL SCIENCE I and II

B. PROJECT DIRECTOR: Roger D. Popple, 811 Eighth Street, Reedsburg, Wisconsin 53959. (608)524-4474

C. PROJECT HEADQUARTERS:
  1. Webb High School, Reedsburg, Wisconsin 53959.
  2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 1 person regularly employed.

E. PROJECT HISTORY:
  1. Principal originator: Roger D. Popple.
  2. Date and place of Initation: August 1968. Revamped August 1971.
  3. Overall project purpose: Develop awareness in the student of the workings of the natural world and man's relationship to the natural world.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. To develop an appreciation of man's natural heritage and to foster an interest in perpetuating this heritage.
    b. To develop a realization of the inherent worth of life.
    c. To develop an understanding of basic ecological principles and learn to apply these principles to all of man's activities.
    d. To develop an understanding of Forest Management principles and learn to apply these principles to the management of the school forest.
    e. To develop an appreciation of the land and to recognize the need to apply sound principles to its management.
    f. To develop an understanding of water quality and the techniques used in evaluating water quality.
    g. To develop an appreciation of our natural fauna and a need to apply sound principles to the management of wildlife.
    h. To understand the role of the natural world in human recreation and to utilize these facilities in a manner that will perpetuate these natural areas.
    i. To experience the peace that comes when an individual is "tuned in" to the functioning natural world.
  2. New instructional materials being produced: Yes. Grades 10-12.

H. MATERIALS PRODUCED:
  1. K-6: None.
  2. 7-12: None.
  3. Others:
    a. Aquatic Ecology Texts.
    b. Field Exercises in Environmental Science.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
   1. Other materials currently being developed: None.
   2. Development of other materials anticipated: Terrestrial Ecology Activities.

L. PROJECT IMPLEMENTATION:
   1. Number of schools now using entire set of materials: 1.
   2. Number of teachers having adopted all of the project materials: 1.
   3. Number of teachers using some of the project materials: 1.
   4. Total number of students using project materials: 180.
   5. Totals stated are definite.
   6. Names and locations of schools where the course is being taught: Not applicable.

M. TEACHER PREPARATION: Not applicable.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
Project expanded from one - 1 semester course to seven - 1 semester courses (E.S. I and E.S. II). Our program was developed for our district; update is a continuing part of the program.

P. PLANS FOR THE FUTURE:
Expanding the program to include more students and including additional activities.

A. PROJECT TITLE: ECOLOGY AND HUMAN VALUES

B. PROJECT DIRECTOR: George Conom, 220 Kroncke Drive, Sun Prairie, Wisconsin 53590. (608)837-5181

C. PROJECT HEADQUARTERS:
1. 220 Kroncke Drive, Sun Prairie, Wisconsin 53590.
2. Special facilities or activities available for visitor viewing: Yes. Course of study and materials in which student simulation of values toward environment occurs.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: George Conom and Sandra Robertson.
2. Date and place of Initiation: September 1971 - Sun Prairie Senior High School.
3. Overall purpose: To correlate the physical sciences and human values in the study of the environment and how and why man acts the way he does in it and to it.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: Yes. 12th grade.

H. MATERIALS PRODUCED:
Course of Study for "Ecology and Human Values".

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE:
Course of Study for course "Ecology and Human Values" - $4.00.
Available from project director.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: More simulation games.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 1.
2. Number of teachers having adopted all of the project materials: 2.
3. Number of teachers using some of the project materials: 100.
4. Total number of students using project materials: 500.
5. Totals stated are estimated.
6. Names and locations of selected schools where the course is being taught: Sun Prairie Senior High School, Sun Prairie, Wisconsin.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: No.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: State conferences on environmental education and state conferences on social studies.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Administration and staff of Sun Prairie High School as well as students taking the course.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Development of the entire course along with instructional material.

P. PLANS FOR THE FUTURE:

Student involvement in simulation activities to be developed for future use.

A. PROJECT TITLE: ECO-CURRICULUM DEVELOPMENT AND LEARNING LABORATORY

B. PROJECT DIRECTOR: Dr. William C. Edwards, 520 Harvard Lane, Cheyenne, Wyoming 82001. (307)634-8189

C. PROJECT HEADQUARTERS:
1. Southwest Drive, Cheyenne, Wyoming 82001.
2. Special facilities or activities available for visitor viewing: Yes. Curriculum materials K-6 in Environmental Education and other handouts.

D. PRINCIPAL STAFF: 3 fulltime; 1 half-time; 2 on hourly basis.

E. PROJECT HISTORY:
1. Principal originators: Dr. Wilma Hirst, Robert Larson.
2. Date and place of Initiation: July 1971.
3. Overall project purpose: To improve the environmental literacy of the citizens of Laramie County, Wyoming.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
1. Objectives of the project: There are actually several projects related to the Eco-Lab. The overall objective is the same as 3 above. However, the main project at this time is Eco-Curriculum Development and Learning Laboratory which has as its main objective the development of curriculum in environmental education K-12.
2. New instructional materials being produced: Yes. Headstart and K-12 grades.

H. MATERIALS PRODUCED: Now being produced.

I. MATERIALS AVAILABLE FREE:
Sheets on Environmental Education in Wyoming. What can be done in the home.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: Curriculum guides in environmental education K-12.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: None.
2. Number of teachers having adopted all of the project materials: None.
3. Number of teachers using some of the project materials: 23.
4. Total number of students using project materials: 2,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Not answered.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 17 weeks.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes.
6. Commercial availability of materials: Yes.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By Dr. Robert Eicher, University of Wyoming.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Primarily curriculum development.

P. PLANS FOR THE FUTURE:

Curriculum development.

A. PROJECT TITLE: KEMMERER OUTDOOR LABORATORY

B. PROJECT DIRECTOR: B. L. Mowry, Kemmerer Junior-Senior High School, Kemmerer, Wyoming 83101. (307)877-4575

C. PROJECT HEADQUARTERS:
  1. Kemmerer Junior-Senior High School, Kemmerer, Wyoming 83101.
  2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: None. Project now complete.

E. PROJECT HISTORY:
  1. Principal originator: Florence Krall - Biology Instructor.
  2. Date and place of Initiation: July 1969 - Kemmerer, Wyoming.
  3. Overall purpose: To promote the understanding of the importance of ecological relationships.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Provide satisfying experiences for all students by meeting their basic needs to succeed, to be independent, and to be creative.
    b. To effect competency in learning and skills in the ecological aspects of science consistent with grade level and ability.
    c. To generate affective behavioral changes concerned with the philosophy of conservation that will carry over into adulthood.
  2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: Teachers Guide.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: Not answered.

K. ADDITIONAL MATERIALS BEING DEVELOPED: Not answered.

L. PROJECT IMPLEMENTATION:
  1. Number of schools now using entire set of materials: 4.
  2. Number of teachers having adopted all of the project materials: 25.
  3. Number of teachers using some of the project materials: 25.
  4. Total number of students using project materials: 1,000.
  5. Totals stated are estimated.
  6. Names and locations of selected schools where the course is being taught: School District #1, Kemmerer, Wyoming.

M. TEACHER PREPARATION:

1. Consultant service available for teachers using the materials: Did have.
2. In-service education program for teachers using the materials: Did have.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. Time varies.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. State of Wyoming - Department of Education.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Many activities have taken place at Kemmerer Outdoor Lab.

P. PLANS FOR THE FUTURE:

Continuation of present program - additional activities not planned.

A. PROJECT TITLE: CONSERVATION CENTER FOR CREATIVE LEARNING

B. PROJECT DIRECTOR: Robert J. Legoski, 863 Sweetwater Street, Lander, Wyoming 82520. (307)332-4644

C. PROJECT HEADQUARTERS:
  1. Starrett Junior High School, 863 Sweetwater Street, Lander, Wyoming 82520.
  2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 3 persons regularly employed.

E. PROJECT HISTORY:
  1. Principal originators: S. J. Starrett, Superintendent, District #1; Robert Skyles, Business Manager, District #1.
  2. Date and place of Initiation: January 1968 - Lander, Wyoming.
  3. Overall project purpose:
    a. Develop environmental education curriculum materials.
    b. Provide in-service training to teachers.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Provide resource materials to teachers, students, community.
    b. In-service training for teachers in environmental education.
    c. Develop curriculum materials.
  2. New instructional materials being produced: Yes. Multi-level and multi-disciplinary environmental education activities K-12. Designed as a supplement to existing program.

H. MATERIALS PRODUCED:
K-12 Environmental Education Activities (approximately 300 separate activities on cards) to be used as supplemental program.

I. MATERIALS AVAILABLE FREE:
  1. Natural History Guide To Area.
  2. Brochure describing activities of Center.
  3. List of resource materials available at Center.

J. MATERIALS PURCHASABLE:
Environmental Education Activity Packet of 300 cards, experimental edition - price not established. May be obtained from Lander Conservation Center.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed: Slide Series - Environmental Index of Wyoming.
  2. Development of other materials anticipated: Not answered.

L. PROJECT IMPLEMENTATION:

We are just beginning a state-wide implementation of the experimental materials developed and I can not answer these questions at this time.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 2 weeks.
    b. Summer Institute: Undecided.
    c. Evening classes: Yes. 17 weeks.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Yes. SCIS, ESS, IIS, BSCS, ISCS.
6. Commercial availability of materials: Yes.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. Staff, State Department of Education and University of Wyoming.
2. Pertinent published research studies: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Provided in-service training in new science curricula.
2. Built up materials in resource center.
3. Laid ground work for developing environmental education curriculum materials and general community needs.

P. PLANS FOR THE FUTURE:

Continue with development and testing of Environmental Education curricular materials - then implementation of them.

A. PROJECT TITLE: NATIONAL OUTDOOR LEADERSHIP SCHOOL

B. PROJECT DIRECTOR: Paul Petzoldt, Box AA, Lander, Wyoming 82520.

C. PROJECT HEADQUARTERS:
   1. Box AA, Lander, Wyoming 82520.
   2. Special facilities or activities available for visitor viewing: Not answered.

D. PRINCIPAL STAFF: 60 field personnel and office employees, summer and winter courses.

E. PROJECT HISTORY:
   1. Principal originators: Paul Petzoldt, Robert Hellyer.
   2. Date and place of Initiation: 1965 - Lander, Wyoming.
   3. Overall project purpose: To teach people how to enjoy and conserve the wild outdoors.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
   1. Objectives of the project: To train outdoor leaders.
   2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE:
   1. Course description.
   2. 20 minute 16mm film.
   3. Slide show.

J. MATERIALS PURCHASABLE:
   Outdoor gear of all types through: The Outdoor Leadership Supply Company, Box 489, Lander, Wyoming 82520.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: Not applicable.

M. TEACHER PREPARATION: Not applicable.

N. PROJECT EVALUATION: Not answered.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969: Not answered.

P. PLANS FOR THE FUTURE: Not answered.

A. PROJECT TITLE: WOODSTOCK ENVIRONMENTAL EDUCATION PROJECT (ESEA, TITLE III)

B. PROJECT DIRECTOR: Lynn Yount, 600 Dean Street, Woodstock, Illinois 60098. (815)338-6975

C. PROJECT HEADQUARTERS:
  1. 600 Dean Street, Woodstock, Illinois 60098.
  2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 3 persons regularly employed plus 18 teacher coordinators.

E. PROJECT HISTORY:
  1. Principal originators: Central office staff, staff instructors, interested citizens, and Outdoor Club enthusiasts.
  2. Date and place of Initiation: 1969 - Community Council and Woodstock High School Outdoor Club.
  3. Overall purpose: Develop and establish educational and community action programs in the schools and a variety of community organizations for the purpose of maintaining a sound social and natural environment.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT OBJECTIVES:
  1. Objectives of the project:
    a. Establish an exemplary resource center.
    b. Identify academic essentials necessary to bring about desired environmental qualities.
    c. Organize interested persons to support formal and nonformal EE activities.
    d. Disseminate environmental materials to specific and general populations.
  2. New instructional materials being produced: Yes. Grades K-12.

H. MATERIALS PRODUCED:
  1. K-6: EE Concept-Activity Materials.
  2. 7-12: EE Concept-Activity Materials.
  3. Others: None.

I. MATERIALS AVAILABLE FREE:
  Samplings only.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
  1. Other materials currently being developed: None.
  2. Development of other materials anticipated: An extention of the EE Concept-Activity Materials.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 10.
2. Number of teachers having adopted all of the project materials: 0.
3. Number of teachers using some of the project materials: 90.
4. Total number of students using project materials: 0.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught:
   a. Clay Street School, Clay Street, Woodstock, Illinois 60098.
   b. Greenwood Elementary School, 4618 Greenwood Road, Woodstock, Illinois 60098.
   c. Westwood Elementary School, 14124 South Street Road, Woodstock, Illinois 60098.
   d. Northwood Elementary School, 2045 N. Seminary, Woodstock, Illinois 60098.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: Yes. 2 days.
   b. Summer Institute: Yes. 2 weeks.
   c. Evening classes: No.
   d. Others: No.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Project went into effect in July, 1971. Late summer workshop was held for benefit of teachers who had agreed to be building coordinators. Extensive ordering of materials was undertaken to support concentration of effort in EE. (Stock a Resource Center). A staff associate was employed to assist teachers in encountering a new curriculum area. During the summer of 1971, twenty-two teachers were involved in a two week workshop for the purpose of designing EE concept oriented activities. These materials were subsequently presented to the teaching staff by the building coordinators. All materials are being used to some extent. Field trips and school site surveys are being developed to coordinate with EE activities.

P. PLANS FOR THE FUTURE:

In-service workshops to reinforce teachers interest and abilities in EE are being planned. Resource persons and materials guides are being developed for use by teachers. Citizen-student community activites are being developed. A spring workshop of two weeks is being planned to construct more concept-activity materials, as well as, to modify and refine those materials being presently implemented.

A. PROJECT TITLE: MISSOURI ENVIRONMENTAL STUDIES APPROACH (MESA)

B. PROJECT DIRECTOR: Dr. Dean A. Rosebery, Science Division, Northeast Missouri State University, Kirksville, Missouri 63501.
(816)665-5121 Ext. 7204

C. PROJECT HEADQUARTERS:
1. Science Hall, Room 159, Northeast Missouri State University, Kirksville, Missouri 63501.
2. Special facilities or activities available for visitor viewing: Yes. Special facilities include headquarters office with concentrated activities during three months of the summer with the remainder of the activities during the academic year.

D. PRINCIPAL STAFF: 4 persons are employed on a full-time basis for three months of the summer. During the academic year, 3 of these faculty members are on a half-time basis.

E. PROJECT HISTORY:
1. Principal originators: 50 administrators from 26 schools of northeast Missouri and Dean A. Rosebery, Head of the Science Division, Northeast Missouri State University. The ESEA Title III program was a continuation of a project supported originally by the Environmental Education Act.
2. Date and place of Initiation: July 1, 1972.
3. Overall project purpose: Teacher training activity for 270 teachers of 21 schools in northeast Missouri. The ultimate aim is that environmental studies will become an integral part of the curriculum.

F. PRESENT COMMERCIAL AFFILIATIONS: No. We are using the published materials of a non-commercial firm which is the environmental studies materials of the American Geological Institute, Box 1559, Boulder, Colorado 80302.

G. PROJECT OBJECTIVES:
1. Objectives of the project:
   a. That each of the teachers who is trained in the program will use environmental studies materials.
   b. That the environmental studies philosophy will modify the teacher's instructional methods.
   c. That the student will have developed an improved attitude toward schools and teachers as a part of his total environment.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION:

1. Number of schools now using entire set of materials: 17.
2. Number of teachers having adopted all of the project materials: Not answered.
3. Number of teachers using some of the project materials: 62.
4. Total number of students using project materials: 180.
5. Totals stated are definite.
6. Names and locations of schools where the course is being taught:
    - a. Kirksville R-III Schools, 401 E. McPherson, Kirksville, Missouri 63501.
    - b. Milan C-II School, Milan, Missouri 63556.
    - c. Boone Co. R-VI Schools, 801 S. Jefferson, Centralia, Missouri 65240.
    - d. Marion County Schools, 4700 McMasters Avenue, Hannibal, Missouri 63401.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
    - a. Workshops: No.
    - b. Summer Institute: Yes. 4 weeks.
    - c. Evening classes: No.
    - d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: Not answered.
6. Commercial availability of materials: Not answered.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. The program is being evaluated by the staff of the Environmental Studies Center at Boulder, Colorado.
2. Pertinent published research studies: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

The ESEA Title III Project on the Missouri Environmental Studies Approach has concentrated on teacher preparation. 30 teachers are trained during each of the three summer months with in-service follow up activities during the academic year. This project should terminate in three years with approximately 270 teachers trained in northeast Missouri to either use or adapt from environmental studies materials.

A. PROJECT TITLE: INTERNATIONAL FIELD STUDIES

B. PROJECT DIRECTOR: Walter B. Bohl, 34 Sheffield Road, Columbus, Ohio 43214. (614)268-1988

C. PROJECT HEADQUARTERS:
1. 680 College Avenue, Columbus, Ohio 43209.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 25-30 persons employed. 3 are full-time.

E. PROJECT HISTORY:
1. Principal originators: Walter B. Bohl, David Holl, Herbert Linzell, Robert McBurney.
2. Date and place of Initiation: July 14, 1970, Columbus, Ohio.
3. Overall project purpose:
   - a. To provide opportunities for students to learn about their environment, in all disciplines, through direct field experiences.
   - b. To provide the structure for developing an intensive field study program with competent leadership.
   - c. To promote educational and scientific activities through direct field experiences.
   - d. To cooperate with school systems as that students may receive academic credit for field studies.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT HISTORY:
1. Objectives of the project:
   - a. To conduct all types of field trips.
   - b. To set up educational field experiences.
   - c. To help teachers fulfill their course needs through field work.
2. New instructional materials being produced: Yes. High school and college level.

H. MATERIALS PRODUCED:
1. K-6: None.
2. 7-12:
   - a. Taxonomic Guide to the Invertebrates of Andros Island, Bahamas.
   - b. Road Guide to the Geology, Soils, and Vegetation on I-75 from Columbus, Ohio to Florida.
   - c. Others: None.

I. MATERIALS AVAILABLE FREE:
Materials are available to those taking the field trips.

J. MATERIALS PURCHASABLE:
Both guides are available for the price of copying.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed:
   a. Improved study guide to the environmental studies of a Bahamian Island course taught on Andros Island.
   b. Similar guides on trips to Mexico, Europe, and various areas in the U.S.A.
2. Development of other materials anticipated: Slide shows on the various trips.

L. PROJECT IMPLEMENTATION:
Many students and teachers are going with us on various trips. We estimate our student participation number at about 2,000. Many schools have taken two or more trips. One school has a grant to take as many as they can for the next two years. Schools who participated in the course taught on Andros Island include:
1. Madison High School, 1515 Grace Street, Mansfield, Ohio.
2. Hathaway-Brown School, 19600 North Park Blvd., Cleveland, Ohio.
3. Lexington High School, 103 Clever Lane, Lexington, Ohio 44904.
4. Columbus School for Girls, 56 S. Columbia, Columbus, Ohio 43209.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: No.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVAULATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
1. From July 1970 to July 1971, approximately 20 trips were made, from one to ten days long.
2. Since July 1971, we have been involved in 63 field trips which ranged from two-days to thirty-five days.
3. We have been involved in an Inner City Program to help local community and settlement houses take their charges on half day, full day, and overnight experiences of all kinds.

P. PLANS FOR THE FUTURE:
1. Complete our Marine Station on Andros Island with complete dormitories, dock, electricity, water facilities, and laboratory.
2. Get more schools interested in taking field trips in connection with specific courses they teach.
3. Develop field stations in other areas of the country and world.

A. PROJECT TITLE: OUTDOOR EDUCATION

B. PROJECT DIRECTOR: Terry L. Wilson, 666 Gilbert Avenue, Mansfield, Ohio 44907. (419)756-9444

C. PROJECT HEADQUARTERS:
1. 1515 Grace Street, Mansfield, Ohio 44907.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Terry L. Wilson, Ronald Reed.
2. Date and place of Initiation: April 1, 1970.
3. Overall project purpose: Outdoor education has been organized to give 6th grade students an outdoor experience aimed at broadening their understanding of nature and how man can and does affect it.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT HISTORY:
1. Objectives of the project:
   a. To create an overall appreciation of nature and its processes.
   b. To acquaint children with some of the problems of their environment and some possible solutions.
2. New instructional materials being produced: Yes. 5th and 6th grades.

H. MATERIALS PRODUCED:
1. K-6: 6th grade Outdoor Education Workbook.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE:
A limited number of workbooks are available for special purposes.

J. MATERIALS PURCHASABLE:
Workbooks are sold for $1.00 each.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: We have developed a short videotape of the spring experience.
2. Development of other materials anticipated: We anticipate developing a teacher's edition to the workbook. A land lab is now being formulated.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 6.
2. Number of teachers having adopted all of the project materials: 19.
3. Number of teachers using some of the project materials: 19.

4. Total number of students using project materials: 550.
5. Totals stated are definite.
6. Names and locations of selected schools where the course is being taught: Madison Local Schools, 1515 Grace Street, Mansfield, Ohio. Used at all six elementary schools.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: No.
2. In-service education program for teachers using the materials: No.
3. Pre-service training program for teachers desiring to use the materials: Yes.
4. Kinds of teacher preparation programs available:
   a. Workshops: No.
   b. Summer Institute: No.
   c. Evening classes: No.
   d. Others: Individual meetings with teachers, approximately two hours each.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

Our program has been very successful over the past three years. The sixth grade students attend camp for four days and go to ten different activities during this time. These activities are designed to give a brief overview of nature and its systems as a few social and problem-solving exercises.

P. PLANS FOR THE FUTURE:

We would like to expand this program to fifth and sixth grade students, having classes in both the spring and the fall. We would also like to develop a complete environmental education center located on a developing land laboratory.

A. PROJECT TITLE: K-12 ENVIRONMENTAL EDUCATION PROJECT

B. PROJECT DIRECTOR: Dr. Edward R. McLaughlin, 809 South Street, Rapid City, South Dakota 57701. (605)342-3164

C. PROJECT HEADQUARTERS:
1. 827 Franklin Street, Rapid City, South Dakota 57711.
2. Special facilities or activities available for visitor viewing: No.

D. PRINCIPAL STAFF: 2 persons regularly employed.

E. PROJECT HISTORY:
1. Principal originators: Superintendent of Schools.
2. Date and place of Initiation: August 1970. Rapid City Public Schools.
3. Overall project purpose:
   a. Develop an outdoor classroom amd camping experience for 6th grade students.
   b. Develop an environmental education instructional materials center.
   c. Provide an in-service training program for teachers and administrators.
   d. Develop study plots or research plots for environmental education.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT HISTORY:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED:
1. K-6: Outdoor Classroom Guide for Sixth Grade Teachers.
2. 7-12: None.
3. Others: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: None.
2. Development of other materials anticipated: Teacher and student packs on special conservation topics.

L. PROJECT IMPLEMENTATION:
1. Number of schools now using entire set of materials: 20.
2. Number of teachers having adopted all of the project materials: 300.
3. Number of teachers using some of the project materials: 300.
4. Total number of students using project materials: 14,000.
5. Totals stated are estimated.
6. Names and locations of schools where the course is being taught: Not answered.

M. TEACHER PREPARATION:

1. Consultative service available for teachers using the materials: Yes.
2. In-service education program for teachers using the materials: Yes.
3. Pre-service training program for teachers desiring to use the materials: No.
4. Kinds of teacher preparation programs available:
    a. Workshops: Yes. 1-3 days.
    b. Summer Institute: No.
    c. Evening classes: No.
    d. Others: None.
5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.
6. Commercial availability of materials: Yes. People and Their Environment available from J. G. Ferguson Publishing Company, Chicago, Ill.

N. PROJECT EVALUATION:

1. Has the effectiveness of the materials been evaluated: Yes. By the South Dakota State Environmental Council.
2. Pertinent published research: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:

1. Resource center developed for school system for all environmental education materials.
2. Developed three nature trails and three arboretums.
3. Approximately 2,800 students from the sixth grade have participated in a three day outdoor classroom experience.
4. Approximately 2,400 students were taken on a one day environmental field trip.
5. Over 700 teachers have received or participated in various inservice training.

P. PLANS FOR THE FUTURE:

Changing peoples attitude to a positive view regarding environmental education.

A. PROJECT TITLE: SILVERTON-WALDHEIM OUTDOOR EDUCATION LABORATORY

B. PROJECT DIRECTOR: Don Schaefer, Courthouse - Room 328, Everett, Washington 98201. (206)259-9315

C. PROJECT HEADQUARTERS:
1. Courthouse - Room 328, Everett, Washington 98201.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: Director and caretaker during most of the year. Summer staff of 14 plus teacher courselors.

E. PROJECT HISTORY:
1. Principal originators: Members of the Intermediate School District 109 Staff.
2. Date and place of Initiation: 1947.
3. Overall project purpose: To make available an opportunity for school children to learn more about their natural resources through a camp-life experience. This emphasis has changed to broaden it to a total environmental experience.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT HISTORY:
1. Objectives of the project:
   a. Student training - 50%.
   b. Teacher training - 50%.
2. New instructional materials being produced: Yes. The main emphasis is on grades 4-8. Hopefully this will be expanded to all grade levels in the future.

H. MATERIALS PRODUCED:
At this time the materials are still in rough form and consist of guides to individual activities or trails in and around the lab.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED:
1. Other materials currently being developed: We are currently working on a series of slide-tape programs.
2. Development of other materials anticipated: Activity guides and a handbook for teacher-counselors.

L. PROJECT IMPLEMENTATION:
Approximately 1,000 students are using our materials.

M. TEACHER PREPARATION:
1. Consultative service available for teachers using the materials: Yes - to a limited extent.
2. In-service education program for teachers using the materials: Not yet.

3. Pre-service training program for teachers desiring to use the materials: No.

4. Kinds of teacher preparation programs available:
   - a. Workshops: Yes. 1 day.
   - b. Summer Institute: Yes. 8 weeks. 12 resident credit course from Western Washington State College entitled Practicum in Environmental Education.
   - c. Evening classes: No.
   - d. Others: None.

5. Availability of pre-service and/or in-service teaching materials for educators to use in preparing teachers: No.

6. Commercial availability of materials: No.

N. PROJECT EVALUATION: None.

O. SUMMARY OR PROJECT ACTIVITIES SINCE 1969:

Starting in 1969 our program affiliated with Western Washington State College in an effort to provide teacher-training of a unique nature. Unique in that the teachers have available to them groups of 4-8th grade students on a week-long 24 hour basis to try out their environment education ideas. If they work fine, they can be used as is; if not, they can be altered under the guidance of the staff and other teacher-students and tried again until success is achieved.

P. PLANS FOR THE FUTURE:

Continuation of activities.

A. PROJECT TITLE: WAUSAU OUTDOOR EDUCATION CENTER

B. PROJECT DIRECTOR: Hugh Curtis, Wausau District Public Schools,
407 Grant Street, Wausau, Wisconsin 54401. (715)845-5279

C. PROJECT HEADQUARTERS:
1. Wausau School Forest - County KK - 12 miles south-west of Wausau.
2. Special facilities or activities available for visitor viewing: Yes.

D. PRINCIPAL STAFF: 2 persons regularly employed, 5 part-time.

E. PROJECT HISTORY:
1. Principal originators: Arden Hoffmann, Harry Jones.
2. Date and place of Initiation: June 1966.
3. Overall project purpose: To provide experiences for underprivileged children that would not be available to them in their normal life due to a deficiency in their social, mental, or economic situation.

F. PRESENT COMMERCIAL AFFILIATIONS: None.

G. PROJECT HISTORY:
1. Objectives of the project: See E.3.
2. New instructional materials being produced: No.

H. MATERIALS PRODUCED: None.

I. MATERIALS AVAILABLE FREE: None.

J. MATERIALS PURCHASABLE: None.

K. ADDITIONAL MATERIALS BEING DEVELOPED: None.

L. PROJECT IMPLEMENTATION: None.

M. TEACHER PREPARATION: None in connection with the project.

N. PROJECT EVALUATION: None.

O. SUMMARY OF PROJECT ACTIVITIES SINCE 1969:
This project was geared to help the underprivileged "socially" and has continued as such. The project is based at the school forest camp but "environment" is not the emphasis of the program.

P. PLANS FOR THE FUTURE:
Continue the summer program but include the "environment" into the theme of activities.

APPENDIX A

RECOMMENDED PROJECTS AND PROGRAMS
WHICH DID NOT RETURN COMPLETED QUESTIONNAIRES

Those projects and programs listed below were recommended by the appropriate state environmental education coordinator or his associate, but did not return completed questionnaires through October 6, 1972. In some cases, outdated questionnaires were on file at SMEAC, but a decision was made not to use them.

Those marked by asterisk (*) made a response which indicated their existence and viability, but did not return a completed questionnaire. Those not starred made no response.

In several cases, response from the director of record indicated that the project or program had been terminated, or that it was for some reason inappropriate for inclusion. In such cases, the projects or programs have not been listed.

ALABAMA

Birmingham

Green Thumb Gardening
Mel Wallace
Botanical Gardens
Birmingham 35213

Decatur

Environmental Science in the Middle School
Robert Bumpus
Decatur City Schools
Decatur 35601

Mobile

Outdoor Education
Vincent Brocato
Mobile County Schools
P.O. Box 1327
Mobile 36601

ALASKA

Anchorage*

Dimond High-Mears Junior High
Anchorage Borough Schools
Mrs. Lucille Frey
2909 West 88th
Anchorage 99502

Hoonah

Hoonah City Schools
John G. McConnell
P.O. Box 8
Hoonah 99829

Juneau

U. S. Forest Service Environmental Education
Mrs. Alice Cook
P.O. Box 1628
Juneau 99801

Juneau
Bureau of Indian Affairs
Eva M. Kriger
P.O. Box 3-8000
Juneau 99801

Ketchikan
Ketchikan Gateway Borough Schools
P.O. Box 2550
Ketchikan 99901

ARKANSAS

Altus
Altus-Denning Public Schools
Miss Sula Kate Brashears, Superintendent
Altus 72821

Cherry Valley
Cross County High School
Grover L. Cooper, Superintendent
Cherry Valley 72324

Fayetteville
Fayetteville Public Schools
Harry Vandergriff, Superintendent
1000 West Stone Street
Fayetteville 72701

Fort Smith
Fort Smith Public Schools
C. B. Garrison, Superintendent
3205 Jenny Lind Road
Fort Smith 72901

Hot Springs*
Hot Springs Public Schools
Gerald H. Fisher, Superintendent
140 East Border Street
Hot Springs 71901

Lake City
Dixie Public Schools
Newton A. Norris, Superintendent
Route 3
Lake City 72437

Lonoke
Lonoke Public Schools
Maurice Sagely, Superintendent
501 West Academy
Lonoke 72086

Monticello
Drew Central Public Schools
Paul Q. Gardner, Superintendent
Route 4
Monticello 71655

Palestine
Palestine Public Schools
Lamar Barber, Superintendent
Palestine 72372

Paragould*

Paragould Public Schools
Orville Roberts, Superintendent
West Court Street
Paragould 72450

Rogers

Rogers Public Schools
Greer Lingle, Superintendent
1114 South Fifth Street
Rogers 72756

CALIFORNIA

Los Angeles

Environmental Education Title III Project
Los Angeles City Schools
Grant Cary, Director, Laurel Ecology Center
1044 North Hayworth Avenue
Los Angeles

Pleasant Hill

Project MER (Regional Ocean Resources Monitoring Program)
George Castellani, Project Director
75 Santa Barbara Road
Pleasant Hill 94523

Sacramento

Outdoor Environmental Education School
Sacramento County Schools
C. L. Underwood, Director
6011 Folsom Boulevard
Sacramento 95821

San Diego*

Community Environmental Education Project
Howard Weisbrod, Project Director
6401 Linda Vista Way
San Diego 92111

Santa Ana

Community Environmental Education Project
Orange County Schools
Nathaniel Lamm, Project Director
1104 Civic Center Drive West
Santa Ana 92701

Visalia

Environmental Expression Through Art
Sabin Gray, Project Director
Tulare County Schools
202 County Civic Center
Visalia 93277

CONNECTICUT

Enfield

Fermi High School
Frank Gross
Maple Street
Enfield 06082

New Haven

Southern Connecticut State College
Harry Haakinson
501 Crescent Road
New Haven 06515

Westport

Westport Board of Education
Rufus Morton
Westport 06880

DELAWARE

Lewes

John Stenger Environmental Institute, Inc.
John Stenger, Director
Lewes 19958

Milford

Sea Beside Up Project
Dr. Maura Geens, Director
Milford School District
906 Lakeview Avenue
Milford 19963

Wilmington

Marshallton-McKean School District
Fred Boyer
1703 School Lane
Wilmington 19808

DISTRICT OF COLUMBIA

Washington

Operation Lightship
Thomas McFadden
National Capitol Parks
1100 Ohio Drive, S. W.
Washington 20024

Washington

Youth Environmental Education Project
Mrs. Barbara Mott, Director
Frederick Douglass United Community Center
2027 Martin Luther King Jr. Avenue, S. E.
Washington 20020

Washington*

Madison Elementary School
Mrs. Sylvia Shugrue
10th and G Streets, N. E.
Washington 20002

Washington*

National Capitol Parks
Miss Marley Thomas
1100 Ohio Drive S. W.
Washington 20242

FLORIDA

Orlando

Environmental Information Center
Orange County
Orlando 32802

GEORGIA

Atlanta

Center for Environmental Studies
Mrs. Lucy Smith, Director
Atlanta Public Schools
2380 Peachtree Road
Atlanta 30309

Atlanta

Panola Mountain Environmental Study Area
Don Nichols
Georgia Conservancy
Candler Building
Atlanta 30303

Savannah

The Savannah Science Museum Inc.
Frederick C. Schlein, Director
4405 Paulsen Street (at 61st)
Savannah 31405

Valdosta

Natural Resources Institute for Teachers
Dr. Clyde Connell, Director
Valdosta State College
Valdosta 31601

Waycross

Okefenokee Science Center
Dr. A. L. Woodard, Director
1700 Carswell Avenue
Waycross 31501

HAWAII

Aiea
Aiea High School Environmental Studies Program
Toshi Nakasone, Principal
98-1276 Ulune Street
Aiea 96701

Hilo*
Hawaii District - Environmental Education
Shuichi Tanaka, Curriculum Specialist, Math and Science
Box 1922
Hilo 96720

Honolulu
Agriculture and the Environment
Tom Hatakeyoma
Box 2360
Honolulu 96804

Honolulu
Conservation and Ecology
Tom Hatakeyoma
Box 2360
Honolulu 96804

Honolulu
Love Our Vital Environment (LOVE)
June Leong, Principal (Stevenson Int.)
1202 Prospect Street
Honolulu 96822

Honolulu
Student to Student TV Production in Environment
Sigfried Ramler
Punahou School
1601 Punahou Street
Honolulu 96822

Kailua
A Concurrent Course Offering: Environmental Studies (Science), Environmental Problems (Social Studies)
Flora Takekawa, Principal
Kailua High School
451 Ulumana Drive
Kailua 96734

IDAHO

Boise
Jefferson Elementary School
Sam Stimple, Principal
Boise 83705

Lewiston*
Environmental and Outdoor Education Survey
Andrew L. Smith, Superintendent
Independent School District #1
Lewiston 83501

McCall

Adams-Valley-Washington-Idaho Country Joint
Outdoor Workshop
Joe Frasier, Forester
U.S. Forest Service
McCall 83638

ILLINOIS

Carbondale

Carbondale Community High School
L. W. Martin, Superintendent
Carbondale Administration Center
Carbondale 62901

Moline

Moline Public Schools
Joseph Vermeire
Woodrow Wilson Junior High School
1301 - 48th Street
Moline 61265

Rockford

Atwood Lake
Bob Weirick
2685 New Milford School Road
Rockford 61109

Shelbyville

Shelby County
Denson Sprouse
1100 East Northland Drive
Shelbyville 62565

INDIANA

Evansville

Senior High Ecology - Integrated
James D. Schwengel, Science Department Chairman
William Henry Harrison High School
211 Fielding Road
Evansville 47715

Gary

Day Camping Environmental Education - 5th Grade
Victor Fraser
Deep River Environmental Education Center
3100 Liverpool Road
Gary 46405

Lafayette

Social Studies Integrative Environmental Education
Douglas Paprocki, Chairman, Social Studies Department
Jefferson High School
9th and Brown Streets
Lafayette 47904

Martinsville

Teacher Training Residence Outdoor Education
Ron Riggins, Director
Bradford Woods
Martinsville 46151

New Albany
Field Biology and Elementary Outdoor Education
Glen Lennert, Science Supervisor
New Albany-Floyd County Consolidated School Corporation
802 East Market Street
New Albany 47150

West Lafayette
A.T. - Audio Tutorial Senior High
David McGaw, Biology Teacher
West Lafayette High School
Leslie Road
West Lafayette 47907

Whiting
Ecology Club and Community Oriented Environmental Education
Thomas Roman, Social Studies Instructor
George R. Clark High School
1921 Davis Avenue
Whiting 46394

IOWA

Bettendorf
Department of Outdoor Education
Don W. Jurgs
1315 23rd Street
Bettendorf 52722

Bettendorf
Bettendorf Community School District
Bettendorf 52722

KENTUCKY

Clermont
Bernheim Forest Nature Center
Ben Armstrong
Bernheim Forest
Clermont 40110

Morehead
Education Department
Morehead State University
Morehead 40351

Paducah
Paducah Public Schools
James M. Major
Clark Street
Paducah 42001

Paris
Bourbon County School System
Harold Grooms
Paris 40361

LOUISIANA

Baton Rouge

Outdoor Education and Natural Science Areas
Dr. E. W. Dayton, Jr.
P.O. Box 44064
Baton Rouge

Lafayette

Environmental Education - Natural History Museum
Mrs. Beverly Latimer
637 Girard Park Drive
Lafayette 70501

St. Martinville

Outdoor Education Center
Rene Calais, Superintendent
St. Martin Parish School Board
St. Martinville 70582

MAINE

Kennebunk

Regional Environmental Education Program
Mrs. Susan Braun, Coordinator
Kennebunk High School
Kennebunk 04043

Ocean Park

Ocean Park Environmental School
Waldo Stone, Director
Box 338 (N.E.B.C.)
Ocean Park 04063

Windham

Outdoor Education Program
Robert L. Hunt, Coordinator
Windham High School
Windham 04082

MARYLAND

Annapolis

Anne Arundel County Outdoor Education Program
Paul Rusko
Anne Arundel County Board of Education
Green Street
Annapolis 21404

Baltimore

Social Studies, Science, Environmental Education Course
Dr. Benjamin Poscover
Lansdowne Senior High School
3800 Hollins Ferry Road
Baltimore 21227

Snow Hill

Worcester County Outdoor Education Program
Fred Fletcher
Worcester County Board of Education
Market Street
Snow Hill 21863

Towson

Baltimore County Environmental Education Program
John Heck
Baltimore County Board of Education
Aigburth Manor
Towson 21204

MASSACHUSETTS

Lanesborough

Outdoor Education
Neil R. Anderson
Lanesborough Elementary School
Lanesborough 01237

Salisbury

Marine Science
Alan Railsback
Salisbury Elementary School
Salisbury 01950

West Newbury

Environmental Geology
Robert Knights
Pentucket Regional High School
West Newbury 01985

Westfield

Project EPIC
Donald Lambert
102 Elm Street
Westfield 01085

MICHIGAN

Wyandotte

Wyandotte Public Schools
Harry Obeline
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Wyandotte 48192

MINNESOTA

Minneapolis

Minnesota Environmental Education Council
Robert E. Collins
5400 Glenwood Avenue
Minneapolis 55422

St. Paul

Minnesota Environmental Education Steering Committee
Dr. E.R. Peterson and Roger Schoenecker
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St. Paul 55101

Windom

Windom Environmental Education Learning Center
Robert Hofflander
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Windom 56101

MISSISSIPPI

Batesville

South Panola Outdoor Study Center
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South Panola High School
Batesville 38606

Carthage

Red Water Day School
J. C. Bates, Principal
Route 7, Box 9
Carthage 39051

Coldwater

East Tate Conservation Center
Woodrow Williams, Principal
East Tate Attendance Center
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Coldwater 38618

Fulton

Itawamba County Conservation Program
Glen C. Loden, Superintendent
Itawamba County Schools
Fulton 38843

Greenwood

Leflore County Outdoor Conservation Education Laboratory
Otis Allen, Superintendent
Leflore County Schools
Greenwood 38930

Jackson*

Hinds County Environmental Nature Center
James E. Smith, Principal
Bryam High School
Route 5
Jackson 39212

Ripley

Tippah County Environmental Education Center
Troy Holliday, Superintendent
Ripley 38663

Vicksburg*

Warren Central Outdoor Laboratory and Forest
Mrs. Audrey Kinzer
Warren Central Sigh School
Route 1
Vicksburg 39180

Walnut Grove

Standing Pines Conservation Laboratory
Emerick B. Boyt
Standing Pines Indian School
Route 2
Walnut Grove 39189

MISSOURI

Chesterfield

Environmental Ecological Education K-12
Verlin Abbott
Parkway Public School
Chesterfield 63017

University City

Outdoor Natural Science Laboratory
7401 Balson
University City 63130

MONTANA

Cut Bank

Outdoor Experience in Glacier National Park
Miss Verna Rasmussen, Principal
Cut Bank Elementary Schools
Cut Bank 59427

NEBRAKSA

Millard

Sixth Grade Outdoor Education Program
Stan Anderson
Millard High School
14905 Que Street
Millard 68137

Omaha

Environmental Field Studies
Larry Hardt
Valley View Junior High School
3534 South 108th Street
Omaha 68144

Omaha

Sixth Grade Outdoor Education Program
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Prairie Lane Elementary School
114th and Hascall
Omaha 68144

NEVADA

Las Vegas	Gilbert School Environmental Education Dr. Les Burgewardt C. T. Gilbert Elementary School Las Vegas 89104
Reno	Environment Class for Non-Science-Oriented Students Bill Campbell Hug High School Reno
Reno	Environment/Conservation Problems Bill Campbell Hug High School Reno
Reno	Washoe County Outdoor Education Center ESEA Title III Brian Wise Washoe County Schools Reno

NEW HAMPSHIRE

Hanover	Environmental Studies Program Ronald N. Bailey, Director of Environmental Studies Dresden School District Hanover Junior-Senior High School Hanover 03755
Keene	Monadnock Regional High School Nature Area Program Swanzey Center Douglas Leslie, Director RFD #1 Keene 03431
Manchester	St. Anselm's College School and Community Environmental Education Project James W. Morrison, Director St. Anselm's College Manchester 03102
Nelson	Munsonville Elementary School Environmental Education Project Mrs. Cornelia Iselin, Director Nelson Conservation Commission Nelson 03457

NEW JERSEY

Kearny

Learning Camp
Robert E. Mulligan, Superintendent
Franklin School
100 Davis Avenue
Kearny 07032

Madison

Education for Survival
Dr. Gertrude G. Tempe
Madison Public Schools
Madison 07940

Ridgewood

Ridgewood Outdoor Education Program
Richard J. Miller
Ridgewood Public Schools
Ridgewood

Union

Pollution Control Education Center
Charles Murphy
Administration Building
2639 Morris Avenue
Union 07083

NEW MEXICO

Albuquerque

Outdoor Education Center
Albuquerque Public Schools
John Cox, Director
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Albuquerque 87103

NEW YORK

Albany

Environmental Forum
Louis Ismay, Chairman
State University of New York at Albany
1400 Washington Avenue
Albany 12222

New York

Environmental Action Coalition
Karen Dumond, Director
235 49th Street
New York 10017

Sherburne

Rogers Conservation Center
Dr. John Weeks
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Sherburne 13460

Spring Valley

"EPICS" Environmental Problems for Individually Centered Studies
Gilbert A. Zinn
36 Mallery Road
Spring Valley 10977

Stony Brook

Suffolk Environmental Biology
Dr. Victor J. Gerhard
Scope
Stony Brook 11790

Yorktown Heights

Project ECOS
Dr. Francis Thompson
Putnam-North Westchester BOCES
Fox Meadow Road
Yorktown Heights 10598

NORTH CAROLINA

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Surry County Schools
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Greensboro 27402

Hendersonville

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Hendersonville City Schools
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Hendersonville 28739

High Point

Dr. Dean B. Pruette, Superintendent
High Point City Schools
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High Point 27261

Marshall

Mr. Robert L. Edwards, Superintendent
Madison County Schools
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Marshall 28753

Morganton

Mr. Johnson H. Steelman, Science Coordinator
Burke County Schools
Drawer 989
Morganton 28655

Murfreesboro
Mr. A. R. Bowe, Principal
Riverview School
Murfreesboro 27855

Murphy
Mr. John Jordan, Superintendent
Cherokee County Schools
Court House
Murphy 28906

Raleigh
Mr. Joseph Holliday, Secondary Education
Raleigh City Schools
601 Devereux Street
Raleigh 27605

Red Springs
Mr. I. J. Wicker, Superintendent
Red Springs City Schools
304 W. Second Avenue
Red Springs 28377

Wadesboro
Mr. W. L. Wildermuth, Superintendent
Anson County Schools
P.O. Box 719
Wadesboro 28170

Walnut Cove
Mr. William F. Davis, Superintendent
Stokes County Schools
Walnut Cove 27052

Wilkesboro
Mr. C. Wayne Bradburn, Superintendent
Wilkes County Schools
Wilkesboro 28697

Wilmington
Mr. Heyward C. Bellamy, Superintendent
New Hanover County Schools
Box 390
Wilmington 28401

OHIO

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Outdoor Education
Robert Meadows
Akron City Schools
70 North Broadway
Akron 44308

Athens
Adventure Ecology - Environmental Education
Television Project
Dr. Ken Light
Ohio University, ETSEO
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Athens 45701

Toledo

Outdoor Education
Burt Spice
Toledo City Schools
Manhattan and Elm
Toledo 43608

Troy

Outdoor Education
Robert Brown
Troy City Schools
630 East Main Street
Troy 45373

OKLAHOMA

Bartlesville*

Ecology
Vince Miller
College High School
Bartlesville 74003

Edmond

Conservation of Natural Resources
Jerry Brown
Edmond High School
Edmond 73034

Guthrie

Guthrie Schools (6th Grade) - Outdoor Education
Mrs. Dorothy Ireton
Banner School
Guthrie 73044

Lawton

Ecology
Larry Buchwald and Clarence Shea
Lawton Eisenhower High School
52nd and Gore
Lawton 73501

Norman

University High Laboratory School - Outdoor Education
Dr. Ron Stafford, Director
1734 Haley Avenue
Norman 73069

OREGON

Ashland

Southern Oregon College - Cascade Project
Ron Lamb
1250 Siskiyan Boulevard
Ashland 97520

Central Point

Central Point School District
Bill Brewster
451 N. 2nd Street
Central Point 97501

Oregon City
Clackamas Intermediate Education District
Miss Barbara Fox
168 Warner Milne Road
Oregon City 47045

PENNSYLVANIA

Allentown
Allentown School District
Carl Nunley
31 S. Penn Street
Allentown 18102

Clarion
Project NOW
Dr. John McLain
Clarion State College
Clarion 16214

Coopersburg
Liberty Bell Elementary School
Robert F. Csizma
Coopersburg 18036

Emmaus
Emmaus Junior High School
Thomas D. Fegely
660 Macungie Avenue
Emmaus 18049

Gettysburg*
Gettysburg Area High School
Mrs. Victoria B. Weitzel
Gettysburg Area High School
Gettysburg 17325

Middletown
Outdoor Education Program
Wendell Poppy
Londonderry Elementary School
260 Schoolhouse Road
Middletown 17057

Orefield
The Jungle
Edward M. Davis
Parkland High School
Orefield 18069

Philipsburg
Philipsburg Osceola Mills
Edward Grundy
N. Lincoln Hill Building
Philipsburg 16866

Pittsburgh
Fox Chapel School District
Beulah Frey
Aspinwall Grade School
Fourth and Virginia Avenue
Pittsburgh 15215

University Park
Central Pennsylvania Outdoor Education
Dr. Jerold Elliott
261 Recreation Building
University Park 16802

SOUTH CAROLINA

Anderson
Environmental Ecological Education Center
Ryan Faulkenberry, Director
Box 439
Anderson 29621

Anderson
Environmental Science
Miss Twig Tyler
Westside High School
Pearman Dairy Road
Anderson 29621

Greenville
Greenville Residency Program
Benjamin Carson, Elementary Education Director
Drawer 5575
Station B
Greenville 29606

SOUTH DAKOTA

Hot Springs
Hot Springs Independent School District #10
Hot Springs 57747

Huron*
Huron Independent School District #4
Huron 57350

Madison
Lake Central Independent School District #55
800 N.E. 9th Street
Madison 57042

Madison
St. Thomas School
401 N. Van Eps
Madison 57042

Ramona
Ramona Independent School District #33
Ramona 57054

Rutland
Rutland Independent School District #28
Rutland 57057

Sioux Falls
Sioux Falls Independent School District #1
201 E. 38th Street
Sioux Falls 57102

Sisseton*
Sisseton Independent School District #1
Sisseton 57262

TENNESSEE

Chattanooga
Hamilton County Public Schools
W. B. Randolph, Supervisor of Science
Hamilton County Schools
Chattanooga

Clarksville
Center for Teachers
Mel Mayfield
Austin Peay State University
Clarksville 37040

Kingsport
Bays Mountain Park
Jack Gross
Route #4
Kingsport 37660

Knoxville
Tennessee Valley Authority
Jonathan Wert, Environmental Education Specialist
300 - FH
Knoxville 37902

Nashville*
Department of Conservation
James Bailey, Educational Director
2611 West End Avenue
Nashville

Tullahoma
Tullahoma Outdoor Laboratory
James Kemp
Tullahoma City Schools
Tullahoma 37388

TEXAS

Corpus Christi
Coastal Bend's Living Library
John P. Sprinkle
Corpus Christi Public Schools
P.O. Drawer 110
Corpus Christi 78403

Houston
Environmental Education
Robert Vines
Spring Branch Public Schools
955 Campbell Road
Houston 77024

Tyler

Outdoor Education
Jim Dudley
Tyler Public Schools
Box 237
Tyler 75701

UTAH

Logan

Outdoor Summer Busing Program
C. Bryce Draper, Superintnedent
Cache School District
2063 North 12th East
Logan 84321

Price

Clear Creek Summer Camp
Row Zwahlen and Raymond Rachele
Carbon School District
50 East 4th North
Price 84501

Provo

A Summer Outdoor Environmental Camp
Monroe G. Gallier
Maeser School
150 South 5th East
Provo 84601

VERMONT

Bennington

Environmental Education Materials Project
Duncan A. Campbell
Woodford Road
Bennington 05201

Bondville

Southern Vermont Conservation Society Project
John Stevens
Bondville 05340

Burlington*

The Green Mountain Chapter of the Audubon Society
George Killen, President
148 Laurel Hill Drive
South Burlington 05401

Jericho

Environmental Education Program
Mt. Mansfield Union High School
Robert Smith
Jericho 05465

Montpelier

Vermont State Department of Fish and Game
Conservation Camps (Lake Salem, Lake Bomoseen,
Lake Woodbury)
Edward Kehoe
Montpelier 05602

VIRGINIA

Chatham	Natural Science Studies Pittsylvania County Public Schools Maxwell Bryant Chatham 24531
Glen Allen	Environmental Study Program Richmond Mathematics and Science Center R. Wesley Batten 2200 Mountain Road Glen Allen 23060
Lynchburg*	Field Activities for the Teachers Herbert A. Vitale, Science Supervisor Lynchburg City Public Schools 1101 Court Street Lynchburg 24504
Roanoke	Environmental Education Roanoke City Schools David W. Partington, Jr. P.O. Box 2129 Roanoke 24009

WASHINGTON

Bellevue	Project USE - Outdoor School David Faith 310 102nd Avenue N.E. Bellevue 98004
Olympia	Northwest Environmental Education Center (NEEC) J. Anthony Angell P.O. Box 527 Olympia 98504
Olympia	Outdoor-Environmental Education John Weber 1113 E. Legion Way Olympia 98501
Seattle	Environmental Education Dick Sacksteder N.E. 158th and 120th N.E. Seattle 98155

WEST VIRGINIA

Beckley
Mr. C. D. Munson, Jr., Superintendent
Raleigh County Schools
Beckley 25801

Keyser
Mr. Ernest Page, Jr., Superintendent
Mineral County Schools
Keyser 26726

Logan
Mr. Thomas B. Orr, Superintendent
Logan County Schools
Logan 25601

Parkersburg
Mr. David White, Director
PACE Center, Region VI
1210 - 13th Street
Parkersburg 26101

Wheeling
Dr. Charles Johnson, Superintendent
Ohio County Schools
Wheeling 26003

WISCONSIN

Barron
Barron Public Schools
William Rogers
Riverview School
Barron 54812

Milwaukee
Master Plan for Environmental Education
Miss Nancy Noeske, Environmental Education Coordinator
Milwaukee Public Schools
P.O. Drawer 10K
Milwaukee 53201

Racine
Man and His Environment
Ruth Ann Baumann
Washington Park High School
Racine 53403

WYOMING

Big Piney	Big Piney Outdoor Laboratory Bob Robertson, Superintendent of Schools Big Piney 83113
Jackson	Jackson Summer Outdoor School Ted Majors Jackson High School Jackson 83001
Laramie	University Lab School Outdoor Program Dr. Laurence Walker University of Wyoming, College of Education Laramie 82070
Powell	Powell Outdoor Camping Experience Harold Moewes School Administration Building Powell 82435
Riverton	Riverton Outdoor Camping Experience Neal Carroll School District #25 Riverton 82501

APPENDIX B

STATE COORDINATORS FOR ENVIRONMENTAL EDUCATION

Members of the ERIC/SMEAC network of environmental education coordinators for the states are named below and on the following pages. In general, they furnished the lists of projects and programs to be contacted in this survey, and will be asked to make recommendations for future surveys of this nature.

Alabama

Miss Erline Curlee
Science Consultant
State of Alabama Department of Education
State Office Building
Montgomery, Alabama 36104
(205)269-7504

Alaska

Mr. Lawrence C. Hill
Specialist, Environmental Education
State of Alaska Department of Education
Division of Instructional Services
Pouch F
Alaska Office Building
Juneau, Alaska 99801
Seattle Operator: (206)583-0150; (907)586-5486

Arizona

Dr. Carl E. Beisecker
Arizona State Department of Education
State Capitol Building Room 116
1626 West Washington Street
Phoenix, Arizona 85012
(602)271-5233

Arkansas

Mr. Victor H. Wohlford
Information Officer
State of Arkansas Department of Education
State Education Building
Little Rock, Arkansas 72201
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California

Mr. Rudolph J. H. Schafer
Consultant in Conservation Education
State of California Department of Education
State Education Building
721 Capitol Mall
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Colorado

Mr. Charles Holtzer, Consultant
Environmental Education Improved Learning Unit
Colorado Department of Education
State Office Building, 201 E. Colfax
Denver, Colorado 80203
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Connecticut

Mr. Sigmund Abeles
Consultant in Science Education
State of Connecticut Department of Education
State Office Building
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(203)566-4825

Delaware

Mr. John Reiher
Supervisor, Science and Environmental Education
State of Delaware Department of Public Instruction
Dover, Delaware 19901
(302)678-4667

District of Columbia

Mr. Ruben G. Pierce
Supervisor and Director of Science
District of Columbia Public Schools
415 12th Street, N.W.
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(202)737-0592

Florida

Mr. C. Richard Tillis
Consultant in Environmental Education
Department of Education
Knot Building
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Georgia

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Science Coordinator and Environmental Education
  Specialist
State Department of Education
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Hawaii

Mr. Richard Barnhardt
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State Department of Education Science Department
General Education Branch
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San Francisco Operator: (415)556-0220;
  General Education: (808)521-3228

Idaho

Mr. Harry C. Mills
Advisory Committee Chairman
State of Idaho Department of Education
Idaho State Office Building
Boise, Idaho 83707
(208)384-2205

Illinois	Dr. David W. Yassen, Director Conservation and Environmental Education State of Illinois Office of the Superintendent of Public Instruction 316 South Second Street Springfield, Illinois 62706 (217)525-3330
Indiana	Mr. Joe E. Wright State Environmental Education Consultant State of Indiana Department of Public Instruction Indianapolis, Indiana 46204 (317)633-4507
Iowa	Dr. Lynn Glass Science Consultant Department of Public Instruction Division of Curriculum Grimes State Office Building Des Moines, Iowa 50319 (515)281-3264
Kansas	Mr. J. Clayton Stultz State Department of Education 120 East 10th Street Topeka, Kansas 66612 (913)296-3918
Kentucky	Mr. Lynn M. Hodges State Consultant for Environmental Education Department of Education Capitol Annex Frankfort, Kentucky 40601 (502)564-4824
Louisiana	Dr. Edward Dayton, Jr. Supervisor of Environmental Education State Department of Education Box 44064 Baton Rouge, Louisiana 70804 (504)389-5109
Maine	Mr. Douglas Stafford Science Consultant State of Maine Department of Education Augusta, Maine 04330 (207)289-2541
Maryland	Dr. James W. Latham, Jr. Environmental Education Coordinator Maryland State Department of Education 600 Wyndhurst Avenue Baltimore, Maryland 21210 (301)383-3381

Massachusetts
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183 Tremont Street
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(617)727-5746

Michigan
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Minnesota
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Environmental Education
State of Minnesota Department of Education
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Mississippi
Mr. James J. Hancock
Supervisor of Environmental Education
State of Mississippi Department of Education
Division of Instruction
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Jackson, Mississippi 39205
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Missouri
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Montana
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Nebraska
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State Department of Education
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State Department of Education
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Oregon
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Pennsylvania
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Rhode Island
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South Dakota
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Department of Public Instruction
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Tennessee
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State of Tennessee Department of Education
Division of Instruction
128 Cordell Hull Building
Nashville, Tennessee 37219
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Nevada

Mr. Jack S. O'Leary
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State Department of Education
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New Hampshire

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64 North Main Street
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New Jersey

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New Mexico

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State Department of Education
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New York

Mr. Barry Jamason
Chairman, Environmental Task Force
State Department of Education
Albany, New York 12224
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North Carolina

Mr. Paul Taylor
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Raleigh, North Carolina 27602
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North Dakota

Mr. George Fors
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Ohio

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State of Ohio Department of Education
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(614)469-2761

Texas

Mr. Calvin S. Story
Program Director, Science Department
Texas Education Agency
201 East 11th Street
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Utah

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Utah State Board of Education
Division of Elementary and Secondary Education
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Salt Lake City, Utah 84111
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Vermont

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Director of Instruction - Early Childhood, Elementary
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State of Vermont Department of Education
Division of Learning Services
Montpelier, Vermont 05602
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Virginia

Mr. George Burton
Assistant Superintendent for Instruction
Commonwealth of Virginia
State Department of Education
Richmond, Virginia 23216
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Washington

Mr. David Kennedy
Supervisor of Environmental Education
State Department of Education
Office of State Superintendent
Old Capitol Building
Olympia, Washington 98501
(206)753-2574

West Virginia

Mr. Robert Patterson
State Director of Instruction
Room B 318
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